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Selections.

REMARKS ON HAFFKINE'S METHOD OF PROTECTIVE INOCULATION AGAINST CHOLERA.

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As I have recently been subjected by M. Haffkine to his anti-cholera inoculations, I propose to give an account of my experiences and a description of the method employed in the production of the vaccine.

In the course of his researches on the cholera vibrio which have been carried on during the last two years, M. Haffkine has met with many facts which tend to remove the difficulties that have hitherto stood in the way of accepting this microbe as the cause of cholera. Among these difficulties may be mentioned the impossibility of reproducing a disease in any way resembling human cholera by injections of Koch's vibrio into animals. M. Haffkine has recently succeeded in doing this in rabbits by a very simple and ingenious method. It is well known that the blood serum of the rabbit has the power of killing the cholera microbe. By cultivating the vibrio, first in diluted and then in undiluted rabbit's serum, M. Haffkine has succeeded in "acclimatising" it, so that at length it is completely unharmed by the bactericidal action in question. If a small quantity of a culture in rabbit's serum of these acclimatised vibrios be injected into the veins of the rabbit, the animal will succumb, showing symptoms which M. Haffkine assures me are extremely similar to those of typical cholera. During the collapsed condition that precedes death, cramps are frequently observed, and on *post-mortem* examination the intestine is found to be filled with the typical "rice-water" secretion. The latter, and also the mucous membrane of the intestine, contain the vibrios in large numbers. In some cases they have been found in the bile duct and ureter, but never in any other part of the body. Generally these symptoms appeared within a few days of inoculation, but more rarely the animal remained in apparently good health for periods extending to a couple of months before the symptoms developed. These latter experiments suggest an explanation of those anomalous cases in which a patient has been observed to succumb to a second attack of cholera during the same epidemic. Perhaps he had never been really free from the virus after his first attack. The cholera may have existed in a latent condition, as was the case with these rabbits. I owe my best thanks to M. Haffkine for his permission to mention these results. It is to be hoped that he will soon publish an account of them in detail.

In this, as in many other cases, the first step towards obtaining a protective vaccine was the preparation of an abnormally virulent form of the microbe, the so-called *virus fixe* or *virus exalté*. M. Haffkine succeeded in this by passing the microbe through a series of guinea-pigs. If a guinea-pig is inoculated into the peritoneum with a suspension of an agar culture of the microbe, it will succumb, and in the peritoneum is found an exudation containing a larger or smaller number of the vibrios. If this exudation is injected into the peritoneum of a second guinea-pig, the latter will also succumb, and so on with a third; but, unless certain precautions are taken, the series cannot be kept up. Each successive exudation will be found to contain fewer and fewer microbes,

and at last the total number of microbes present will not be sufficient to kill the next guinea-pig in the series. To avoid this result a procedure has been adopted based on the following facts: The quantity of exudation formed varies in different cases. Usually, if a large guinea-pig is employed, a copious exudation, containing relatively few microbes, is produced. A small guinea-pig, on the other hand, yields a small quantity of exudation rich in microbes. Apparently the quantity of the exudation is a measure of the power of resistance possessed by the individual. M. Haffkine has based, on these facts, his method of passing the microbe through a series of animals. A guinea-pig is inoculated into the peritoneal cavity with cholera vibrios from an agar culture. On its death the peritoneal exudation is removed with a pipette, placed in a test tube, and left for several hours at the temperature of the room. If it is abundant (several cubic centimetres), it is then injected into the peritoneum of a small guinea-pig. If, on the other hand, it is small in quantity (1 cubic centimetre or less), it is injected into a fully-grown animal. On the death of the animals in the former case, the liquid injected will be found to have become concentrated; in the latter case, an increase in quantity will be observed. By attending to these precautions, the cholera virus can be passed through an indefinitely long series of animals. From each exudation in a series, an agar culture is made for the purpose of controlling the purity. Each successive culture will be found to be more virulent than its predecessors; also the guinea-pigs in the series die in shorter and shorter times after injection of the exudation. Between the twentieth and thirtieth passage the maximum degree of virulence appears to be reached. At this stage the peritoneal exudation is fatal to guinea-pigs in six to eight hours after its injection into the peritoneum. Agar cultures made from such an exudation also possess and retain this increased degree of virulence. Microbes from these cultures can kill rabbits and pigeons in doses which would be perfectly harmless if given in cultures of the ordinary degree of virulence. In fact, this *virus exalté* appears to be about twenty times as virulent as the ordinary form of the microbe.

As above stated, this *virus exalté* is rapidly fatal to guinea-pigs when injected into the peritoneum. It also kills them with certainty when introduced into the intestine or when given *per os* after neutralization of the gastric juice with soda and quieting the intestines with opium according to Koch's method. It also differs from the ordinary form of the microbe in that it kills guinea-pigs when injected in small doses into the depth of the muscular tissue of the thigh.

If, however, it is injected under the skin, the *virus exalté* does not kill the animal; it produces a purely local malady. After a few hours an extensive œdema develops. In a few days the necrosed mass of tissue drops off, leaving a granulating wound. This at length heals completely. The animal is now found to be immune against inoculation with cholera in any way whatever, whether it is tested with ordinary or with strengthened virus, and whether it is introduced into the peritoneum, the intestine, or the muscular tissue. Obviously, however, such a method of inoculation could not be practically employed. It is necessary to devise some method of first protecting the guinea-pig against the necrosis produced by the *virus exalté*. This can be accomplished readily by a previous treatment with attenuated virus.

The attenuated virus is prepared by growing the microbe in a slow current of air. About 10 cubic centimetres of bouillon is placed in a flask having two lateral tubulures, and inoculated with the strengthened virus. The flask is placed in an incubator at a temperature of 39° C., and by means of a tube connected with one of the tubulures at one end, and, passing outside the incubator to a water-pump at the other, a slow current of air continually passes over the surface of the bouillon. The other tubulure of the flask is connected with a wash-bottle containing water and placed in the incubator, in order to saturate the entering air with aqueous vapor. This precaution is necessary to prevent undue evaporation, as the bouillon only forms a shallow layer at the bottom of the flask. Under these conditions the microbes produce a culture, but then rapidly die. It is therefore necessary to reinoculate them every third day into a fresh flask of bouillon. After each passage the microbes are found to be more and more attenuated. At last, after a series of passages under these

conditions, the microbes are found to be so altered that they have completely lost the power of producing necrosis in guinea-pigs even when injected under the skin in exaggerated doses. They however, retain the power of still killing these animals when injected into the peritoneum in quantities only slightly larger than is necessary to attain this result with the ordinary virus.

If a dose of this attenuated virus, (say one-eighth of a twenty-four hour old agar culture) is injected under the skin of a guinea-pig an extensive œdema develops within twenty-four hours. During the next few days this diminishes in size, leaving, however, a hard nodule, which persists for a considerable time. If a week later the animal is inoculated with a similar quantity of the strengthened virus an œdema develops, which is less than in the first case and does not lead to necrosis. When tested a few days later the animal is found to have acquired an immunity against the cholera microbe in whatever way it may be inoculated. This immunity has been found to be undiminished a couple of months after treatment.

Rabbits have also been made immune by the same method. They then show themselves refractory to every form of inoculation, including the method above described, which in the control animals leads to a disease resembling the cholera of human beings. M. Haffkine has also produced this immunity in pigeons. These facts led M. Haffkine to try the effect of these inoculations on himself, and afterwards on seven other gentlemen. The following is the account of my own case:

August 16th, midday, Dr. Roux inoculated me with one-eighth of a 24-hour old agar culture of the attenuated virus suspended in 1 cubic centimetre of bouillon in my left side, about 2 inches above the crest of the ilium. 1 P. M. Slight pain locally. 4 P. M. Swelling noticeable, and pain on movement. 8 P. M. Owing to pain on moving found walking about difficult. 10 P. M. Temperature began to rise; noticed a feeling of *malaise*. 12 midnight. Noticed temperature of 100°. This was the highest point reached.

August 17th. 7 A. M. Woke up; felt better; temperature normal. The swelling formed an area about 9 inches long and 2 or 3 wide, extending towards the inguinal lymphatic glands; painful on pressure, and reddened. 12 midday. During the day I worked as usual in the Institut Pasteur, but had a bad appetite and a feeling of fatigue, which once or twice impelled me to lie down for a short time. 3 P. M. The swelling extended during the day to the crest of the pubes and to within an inch of the umbilicus. This secondary extension of the swollen area was not painful on pressure, or reddened. 7 P. M. Felt bilious. 9 P. M. Took four capsules of castor oil.

August 18th. Woke up, feeling all right after a sound sleep; pain notably diminished; could walk about with ease, and went to a swimming bath.

August 19th. Swelling and redness of skin greatly decreased; pain on pressure trivial.

August 21st. 6 P. M. Inoculation with one-eighth of an agar culture of *virus exalté* suspended in bouillon. The injection was made on the center of the inner side of the left arm. 11 P. M. Painful area extended to axilla; slight and occasional headache.

August 22. 4 P. M. Woke up; found it difficult to get out of bed owing to pain, but in a few minutes became accustomed to change of position, and walked about with ease; a slight *malaise* and fever. 6. A. M. Felt better. 9 A. M. Breakfast, good appetite. During the day, August 22nd, slept most of the time, but was awakened every hour to take my temperature; in the evening felt bilious and constipated; took about ½ ounce of liquorice powder; the swelling now extended from the axilla nearly to the elbow; this area was very sharply defined by the redness of the skin. Slept well all night.

August 23rd. Woke up feeling quite well. Pain had decreased, but the swollen area had extended, reaching about 8 inches below elbow. This secondary extension of the swollen area was not painful on pressure, and the skin had a normal color.

August 24th. Pain and swelling notably decreased. Skin beginning to assume a yellow hue.

August 25th. Further decrease of swelling. For an area measuring about 5 inches by 3, the skin was colored yellow.

No enlarged glands were noticed all through the experiment. At present the only trace of the inoculation is a small hard nodule, less than half an inch in diameter, at each seat of injection.

With regard to these inoculations I should like to point out that although the œdematous swelling develops with startling rapidity, there is no reason for considering it as likely to lead to any dangerous inflammation. The cholera microbe is not one that is capable of producing pus. Knowing this fact, neither M. Haffkine or I made any attempt to keep quiet or rest ourselves after our inoculation. M. Haffkine happened to be busy after his first inoculation, and in spite of his fever worked for twenty-four hours continuously in the laboratory without food. Two hours after my second inoculation I experienced the first part of my fever. It is noteworthy that both M. Haffkine and I had more fever after the second inoculation than after the first. All the other gentlemen who have been inoculated experienced only a trivial elevation of temperature and

of discomfort after their second inoculation. Probably this is due to the fact that M. Haffkine and I had our second doses at comparatively short intervals after the first (five and six days respectively), and, as experiments on guinea-pigs indicate, these intervals were too short for the immunifying effect of the first dose to have completely developed.

The seven other cases presented symptoms essentially similar to my own, only, as above mentioned, the second inoculation (which was made after seven or eight days) produced far less general and local disturbance than the first. In two or three cases a transient constipation has been observed to follow the inoculation. In one case diarrhœa had been present for some days before the first inoculation, and vanished the day after it was performed.

M. Haffkine finds that it is also possible to vaccinate guinea-pigs by means of cultures previously sterilized by heat. In these cases the local reaction appears to be less than occurs after inoculation with living cultures. The immunity produced, however, does not seem to be of such a permanent character as that produced by the living microbe. It is possible, nevertheless, that for inoculations on human beings it may be well to commence with sterilized cultures, in order to diminish, as far as possible, the discomfort produced by later inoculations with the living virus.

I may mention here that in all his experiments M. Haffkine employs cultures on agar in preference to those in bouillon. The latter contain far more soluble poisons than the former, and there is reason for thinking that, as with the allied microbe the vibrio Metschnikovi, it is the less readily soluble substances contained in the bodies of the microbes that are concerned in the production of immunity.

What proof have we that these inoculations are of any value whatever in protecting human beings against cholera? If the cholera vibrio is really the cause of this disease, the conditions of infection that obtain in Nature and in the laboratory must be widely different. How, then, can success in producing immunity against "laboratory infection" of a guinea-pig justify us in concluding that we have obtained immunity against "natural infection" of a human being? Obviously we have no direct and absolute demonstration of the value of these inoculations, and no doubt those people who need such proof before they are convinced will feel themselves justified in being "dead certain" of the futility of M. Haffkine's method for a considerable time to come.

In the first place it may be noted that the fact that there is a difference—it may be a great difference—between artificial and natural infection, though suggesting a source of error, is not of itself a reason for thinking that immunity against the one is not immunity against the other. In discussing the probability of an animal or a human being being immune against a particular microbe, we are concerned not so much with how the microbe can get into the system, but with what it does or does not do when it gets there. If any animal has been made immune against the cholera microbe, it has always been found to be capable of resisting it, in whatever way it may have been introduced into the body. Consequently, if a human being has been made immune against the effects of the cholera microbe when injected under the skin, analogy suggests that he is immune against the same microbe when it seeks to enter the system by the natural way, whatever that may be. But are those gentlemen who have been inoculated by M. Haffkine immune to the effects of the cholera microbe when inoculated under the skin? This is a matter which can be put to the test with great facility. The effects of a subcutaneous inoculation of the attenuated cholera microbe on a human being may be said now to be well known and easily recognised. There is a widespread and rapidly developing œdematous swelling and redness, which only vanish gradually after the lapse of several days. A small hard nodule also appears at the seat of inoculation. These changes may be regarded as a distinct character of the cholera inoculation. The fever and *malaise*, on the other hand, can not be so regarded; probably a similar injection of almost any microbe would produce a similar elevation of temperature.

Consequently, the presence or absence of a "local immunity" in a human being who has been subjected to M. Haffkine's treatment can be readily tested by a repetition of his first injection, namely, that of the attenuated virus. M. Haffkine has conceived the good idea of performing this experiment five weeks after his inoculation with the strengthened virus. After

the injection a swelling rapidly developed, and as rapidly disappeared. It had almost gone in twenty-four hours, leaving no hard nodule, as had been the case with the previous inoculations. The result is sufficiently striking when it is remembered that the œdema produced by the first inoculation in M. Haffkine's case took nine days to disappear. As might have been expected, a passing rise of temperature was produced, but this also took place in a guinea-pig that had received the same repeated inoculation, and that had previously been proved to be perfectly immune against cholera on several occasions.

Another objection suggests itself. Dr. Cunningham has isolated several distinct and permanent varieties (or as he prefers to call them, species) of the cholera microbe. Will immunity against one of them confer immunity against another? M. Haffkine's vaccines have been prepared from a cholera microbe of Indian origin, and his inoculated guinea-pigs have shown themselves to be immune against this race. Considering the number of different varieties—a dozen or more—that Dr. Cunningham has described, it is, to say the least, improbable that a chlorea microbe isolated two months ago from a case in the Necker Hospital in Paris should be of identically the same race as the one of Indian origin that has been so long in use in the Pasteur Institute. M. Haffkine finds that a guinea-pig that has been prepared by his method is just as refractory to one microbe as to the other.

Is this method of inoculation likely to confer a permanent immunity? To this question no definite answer can be given as yet. Guinea-pigs inoculated by the same method as has been employed for human beings have been found after two months to have lost none of their immunity. *A priori*, it is far more probable that an inoculation with *virus exalté* should confer a lasting immunity than a slight attack of cholera. In human beings the immunity can always be tested from time to time by a subcutaneous inoculation. In the event of a lasting œdema being produced by this test inoculation, it can form the starting point for a repeated treatment. It may be noted that there is no reason for thinking that this method of inoculation could be any source of danger to other individuals. There is, on the other hand, every reason for believing that the microbes injected are rapidly destroyed in the body, most probably *in situ*.

Lastly, it is important to remember that very probably after the first inoculation, less probably after the second, there may be a temporary diminution in the power of resisting the entry of the cholera microbes. Most probably within three or four days of the injection the power of resisting the attack of the cholera microbes has returned to normal, and after that time will continue to increase. If this is so, these inoculations should not be practised in a given place at the time that an epidemic is raging, without great caution. Before forming a definite conclusion with regard to this, further experiments on animals are needed.

The evidence at present existing shows that M. Haffkine's method of inoculation is not attended by any grave disturbance of health, and that it can be practised on human beings with perfect safety. The fact that it produces immunity against cholera in any form, in animals of such widely different organization as guinea-pigs and pigeons, gives reason for hoping that it may produce an equally good effect in human beings, but it must necessarily be a long time before we can possess any evidence of any value on this point.—*Brit. Med. Jour.*

SALOPHEN.

Siebel (*Therap. Monatshefte*, January, 1892) says that salol was introduced on account of some of the unpleasant symptoms produced by the salicylates. Salol, however, has not been found harmless, and is contraindicated in cases of renal disease. Salophen is a combination of salicylic acid with acetylparamidophenolether.

It is split up into these two constituents by pancreatic ferment, but not by the acid gastric juice. Any of the drug not so decomposed has been found to be excreted with the fæces. Salophen hinders decomposition when in such quantity as to provide sufficient salicylic acid. It is without taste or smell, and has very feeble toxic properties. At most, symptoms of salicylic acid intoxication would be produced, for the other constituent is without poisonous qualities. Dr. Guttman has spoken favorably of the clinical properties of salophen.—*Brit. Med. Jour.*

Communications.

WHEN SHALL WE TREPHINE IN FRACTURES OF THE SKULL?*

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Not so very long ago (a dozen years) the only indications supposed to demand operation, in fractures of the skull, were embraced in these rules:

1. In *compound, comminuted* fractures, *with or without brain symptoms*, the depressed bone should be elevated and the fragments removed to be rid of the irritation the spiculæ will produce and to avoid the inflammation of the brain and its membranes such irritation would be likely to set up

2. In all cases of *local* injury to the skull whether fracture or bruise, followed by a clear evidence of inflammation of bone and persistent symptoms of brain irritation, or of pus between the bone and dura mater, the trephine should be resorted to.

3. Punctured fractures almost invariably lead to inflammation of brain, sooner or later—are the most dangerous of all fractures—and require the use of the trephine *with or without* the presence of brain symptoms.

Upon the contrary it was thought: "Never operate unless the symptoms *are urgent*" (with the above exceptions); in diffused injuries to the cranium and its contents, "operative procedures are *never* justifiable, since the injury is not limited to one point and cannot be relieved by an operation;" and finally "in compound fractures, *even with depression* if not comminuted, an operation should be performed unless the symptoms of compression from local pressure are great;" trephining in gun-shot fractures was almost unknown. Such were the directions of one of our best teachers in 1880.

Now we know that we should operate *in every case* of fracture with depression, even if there be no symptoms whatever; in many diffused injuries trephining is indicated; gun-shot wounds of the skull should invariably be followed by operation, and some go so far as to say that even simple fissure ought to be treated by trephining. Thus the late Dr. D. Hayes Agnew (*University Medical Magazine*, October 1891) in discussing the subject of traumatic epilepsy says: "It is not saying too much to assume that surgery is responsible for the great majority of traumatic epilepsies. The old members of our profession cannot, of course, be held responsible for not practising those methods which time, observation, vivisection and knowledge derived from collateral branches of study have made possible. They said that human life is too precious a thing to be jeopardized by overstepping the bounds of a wise conservatism. On the other hand no charity can release him from responsibility, who, from being wedded to old traditions and who can discover nothing valuable outside of his own narrow horizon, declines to keep step in the grand procession. The doctrine that depressed fractures of the skull without symptoms require no operative interference, a doctrine which in the past has been so deeply rooted in the professional mind, I hold to be responsible for very many of the unfortunate sequels of head injuries. However small may be the depression which follows a fracture of the cranium, save in one or two localities, it will encroach enough upon the dural nerves to cause more or less irritation, which, though insignificant at first and not at all recognizable to the consciousness of the patient, yet eventually will be propagated to the cortex and brain ganglia until finally the paroxysmal explosion occurs. * * * Whenever, therefore, in my judgment, the profession can accept the doctrine that *all depressed fractures of the cranium, however slight may be the depression, and entirely irrespective of pressure symptoms are proper subjects for trephining*, then will traumatic epilepsy largely disappear; indeed, I am sure that he who shall propose to tabulate at the end of the next twenty-five years the cases of epilepsy will find, as compared with the present time, a meagre supply for his purpose. It is not improbable indeed, in view of the greatly diminished risk from trephining, *that the operation will be extended even to cases of simple fracture or fissure of the skull.*"

The reason assigned by Dr, Agnew is that no surgeon, however skilled, can

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determine, without operation, what has happened inside the skull, even in a simple fracture; therefore the necessity for inspection of the interior as well as exterior surface; which is in conformity with the statement of Bouillaud that no blow upon the head, however insignificant it may appear to be, is too slight to excite anxiety regarding the future. For the sequel may be long delayed; as says Dr. Allen McLane Hamilton (*Pepper's System of Medicine*, Vol. v. p, 471): "It is quite common to find old fractures, with depressions which have existed for years without any seeming bad effects, suddenly lighting up convulsions under the influence of some new excitement." Nor, as Agnew says, must there be anything more than a simple fracture to produce disastrous results years after the reception of the injury; for these apparently simple fissures may be attended by grave intra-cranial conditions. No man can say that a fracture of the skull, however simple it may appear, will not be followed by meningeal hæmorrhage, or later by epilepsy, insanity, etc. A case which I saw some years ago in consultation with Dr. L. A Berger, of this city forcibly illustrates this point:

Case 1.—C. L.———, of German birth, age fifty-three, a furrier, of powerful build; was quiet, reserved, and modest in demeanor; not a drinking man; family history good. During the Franco-Prussian war (about 1870) he was struck with the butt of a musket (shown by scar over right parietal eminence and anteriorly). There was no apparent injury to skull, no fracture according to history of case, though he was unconscious for two or three days after time of injury; he went again into active service three weeks after receiving the blow. From 1871 to 1881, (when he came to America and married) his history is a blank. Since his marriage he had developed a peculiar condition; he is subject to attacks of vertigo, is seized with most violent fits of anger (from most trivial causes), often lasting two hours and terminating in an melancholic state continning a day or two. During his last year of life he has been alternately morose, secretive, melancholic and negligent in his business, and extremely restless. On October 18, (1886) he became unusually restless; ran out of house and remained in country all day, walking; returned in evening completely exhausted and unable to account for his disappearance or whereabouts. October 20, no particular change except tendency to talk incessantly; pupils normal; no deviation on protrusion of tongue; no tremor or paralysis; physical functions unimpaired; temperature normal; sleep little and disturbed. He was given bromides and tonics. During next thirty days there was no perceptible change except that gradually a condition like dementia supervened. November 22, he became suddenly unconscious, stertorous breathing, pupils dilated, inability to swallow, pulse 120, temperature 100°. During day breathing assumed Cheyne-Stokes character and death occured twelve hours after onset of coma. *Autopsy.*—Post-mortem examination was made eighteen hours after death; present Drs. Berger, Eggers, Adams and Lanphear. Calvaria removed with difficulty, dura mater adherent; cloudy exudate beneath dura, at site of injury; also in pia. Dura thickened, opaque and inseparable from arachnoid from point of injury up to longitudinal sinus; here was a small piece of bone driven across longitudinal fissure and penetrating the falx cerebri; size of fragment, one inch long and one-sixth inch wide; no effusion or hæmorrhage in brain or ventricles; no other lesions discoverable upon most careful examination.

Here was a case of injury to the skull, with no fracture discoverable at time of accident; yet insanity resulted two years later and death from pachymeningitis sixteen years afterward. It is not improbable that if trephining had been done at time of injury no subsequent trouble would have occurred. The history of this case emphasizes the point I shall presently make, that all cases of local injury to the skull, accompanied by unconsciousness of more than an hour's duration should be trephined.

Another case in which there was no evidence of fracture at time of reception of injury—save prolonged unconsciousness—yet one in which trephining would probably have prevented development of mental trouble, was the following (noticed in the *Kansas City Medical Index*, August 1888):

Case II.—Isaac F———, age forty-one, laborer, family history unknown, previous health excellent, was in September 1887, struck upon the head by falling timbers. The external injury was not great, but he

was comatose for a time, and the attending surgeon, Dr. N. J. Pettijohn, of Kansas City, desired to trephine near the site of the injury; the consulting surgeons, however, demurred because the symptoms present were not of an alarming character, and he showed evidence of rallying. He eventually recovered consciousness, and was restored to fair physical health; but his mental condition is one of serious aspect. He was for some weeks recently under my care, with the object of determining, if possible, the justifiability of trephining now, and the point of selection for operation. I was unable to decide that there is *now* any local point of excitation (the only peripheral symptoms being a tingling and numbness of one little finger)—in other words, there seems to be evidence of general periencephalitis (chronic), and as there was absolutely no improvement under proper treatment, I had him committed to the state lunatic asylum, where he will probably pass the remainder of his days.

Such cases as these are not rare and they are not without their lesson. They teach that in *all cases* where there is even a *suspicion* that there is depression of the internal table the trephine should be employed, notwithstanding the old rule we have been wont to follow. I have used the word "suspicion" advisedly; we cannot, in many instances, be certain that there is a fracture until we cut down to see. As Moulin (*Practice of Surgery*, page 601) says: "Contusions, fissures and fractures do not always admit of proof; and even when the bone is comminuted and the depression considerable, the diagnosis is often a conjecture, owing to the amount of blood extravasated. The gravity of simple fractures arises from the fact that serious injury to important structures is so often associated with them. That I am correct in my assertion that we are justified in trephining even upon a *suspicion* of fracture is proven by the following case:

Case III.—Tod K——, age thirteen years, fell from the bluff, a distance of 65 feet, striking upon his head. The accident occurred about 11 a. m. May 16, 1891. He was not unconscious when conveyed to his home and a physician pronounced his wound not a serious one, washed the lacerated scalp and applied an antiseptic dressing. At 1 p. m. the boy became somewhat drowsy and vomited repeatedly, at which time I was called to take charge of the case. He was quite stupid, pulse very weak, skin of a purple color, "shock" pronounced. Examination showed a cut in scalp about two inches long on the left median line, just behind the parietal eminence; but no special indication of fracture. At 3 p. m., assisted by Dr. John Wilson, I shaved the scalp and enlarged the skin-cut, under chloroform anæsthesia. When the scalp was turned back an extensive fracture of the parietal bone was revealed, with depression two inches or more across. This fracture had been hidden by the scalp's slipping over it entirely and by the boggy swelling of the injured soft parts. A small opening was chiseled in the external plate and an elevator introduced; but the depressed bone could not be raised thus, so a ¾ inch trephine was applied. On removal of the button a very considerable amount of blood came from between the bone and the dura. A large spicula of the vitreous plate projected through the dura and into the brain tissue; this was removed, together with a number of fragments. There was considerable bulging of the brain through the opening and the protruded matter was pulseless. Upon raising the depressed bone into proper position the brain sank and soon pulsation returned and simultaneously the purple hue of the skin gradually disappeared. All clots and fragments having been removed the wound was irrigated with hot water (previously boiled), the wound in the dura closed by a fine catgut suture, a strip of bi-chloride gauze placed next to the dura and projecting through scalp-wound for drainage and the cut in scalp sewed with catgut. The usual dressings were applied and patient put to bed in good condition, color and pulse greatly improved.

At 10-30 p. m. temperature normal, no pain, patient bright and cheerful and talking as if nothing had occurred. Morphine, gr. ⅛, *per orem*, if needed for sleep, was ordered.

May 17th. At 3 p. m. in fine shape—pulse 90, temperature 99.° No pain; free motion in all extremities.

May 18th. Sat up while drainage was removed and dressings applied; no fever; no pain; wound in fine shape, no pus, healing nicely begun. Dressed with iodoform, bi-chloride gauze, cotton and bandage.

May 19th. Condition excellent—no pain; no fever; eats and sleeps well.

May 26th. Dressed head; wound practically well.

May 31st. Patient running about over house. Wound entirely healed. Discharged well.

What the result would have been in this case if the so-called "conservative treatment" of the first doctor had been continued can, of course, be only a matter of conjecture. But I feel sure that if death had not occurred within a day or two, an inflammatory process would have occurred which would have necessitated operation a week or two later when there would have been far more danger; or, if this had fortunately been escaped, an epilepsy would probably have arisen in later years. The objection of Brodie which strange to say, is supported by Ashhurst, (*Principles and Practice of Surgery*, 1889, page 339) that it is better to leave imbedded in the brain, a foreign body or fragment of bone rather than use any force in its removal, is one that can not be too strongly condemned. If the surgeon be *absolutely clean*—i. e., surgically clean—he is not going to do much mischief provided he is reasonably careful. Ashhurst's assertion that meningitis and encephalitis are likely to occur from surgical handling is as utterly false as many other fallacies of ancient pathology; an experience in a large number of cases of operative brain surgery has lead me to know that inflammation is an accident due to infection prior to operation, or to carelessness on the part of the surgeon. A clean wound of the brain or of the meninges will heal without the least sign of inflammation, just as will one in the broad ligament and abdominal walls. Inflammation is not necessary to healing and should not be found in any wound made by a surgeon. As Senn says (*Principles of Surgery*, page 1): "Studied from a surgical standpoint, regeneration includes the process observed in the healing of wounds and the complete or partial restoration of parts damaged. * * * Regeneration and inflammation are distinct conditions, which should no longer be confounded or considered from the same etiological and pathological standpoint. An ideal regeneration takes place without inflammation provided the seat of injury or tissue destruction remains aseptic; that is, free from pathogenic organisms."

We being, then, able to open up the scalp freely, or the skull also, without additional danger, I am not sure but Agnew is correct in asserting that we would be justified in operating in even simple fissure; we certainly ought to do so in every suspicious case. On the other hand, no case, unless the patient is seen to be dying, should be considered too grave for operation. An illustrative case is this:

Case IV.—George E.——, aged twenty-four, was struck by a locomotive on the morning of April 2, 1891. During the day he was seen by at least three prominent surgeons who said that recovery was impossible and all refused to risk an operation. I saw him in consultation with Dr. W. S. Allen, at 6 p. m. At that time he was partially conscious and begged me to do something to give him even a slight chance of recovery. His appearance was frightful; the whole scalp and periosteum was torn away, i. e., the scalp at the margin of the hair was broken loose and hung by a piece not more than three inches wide at the back of the neck; the flange of the drive-wheel had struck him near the coronal suture on the right side, driving the bone down into and fearfully injuring the right frontal convolutions; a fracture extended downward into the orbit, widely gaping and blood still oozing from eye and nose. This was a "diffuse injury" to the skull in which the books direct not to operate. Nevertheless he was chloroformed by Dr. Callaghan and we removed the cinders, broken bones and clots, raised the depressed bone, pushed together the bones which were separated by the long fracture from junction of saggital and lambdoidal sutures to point of crushing, and into orbit, and put in large drainage tubes, replacing scalp and holding it in place by continuous catgut suture.

April 3d. Slept nicely all night; no nausea, no fever (99+), no paralysis, but considerable frontal headache.

April 5th. Drainage removed. Patient doing well.

April 17th. Patient has made an uninterrupted recovery. Discharged from hospital well, though still weak.

In view of such an ideal result can anyone say that any case is too severe to justify an attempt to save life? Yet there are surgeons of eminence who refuse to jeopardize their reputation by operating in such cases. As for me, I believe one

patient's life better than any reputation I can ever acquire as a surgeon.

To summarize the whole matter I offer the following:

RULES FOR TREPHINING IN INJURY OF THE SKULL.

1. All cases of depressed fracture, either simple or compound, require trephining and elevation, whether there be pressure symptoms or not.

2. All punctured fractures and gunshot wounds imperatively indicate the use of the trephine.

In simple fracture of the skull where any symptoms of brain trouble persist exploratory operation should be done.

4. In all cases of local injury to the skull, whether fracture or bruise, followed by evidence of inflammation of bone or persistent symptoms of brain irritation, or of pus between the bone and dura, the trephine should be resorted to.

5. In every case of localized injury to the head where unconsciousness persists for more than an hour, exploratory operation, including opening the skull if necessary, should be done.

6. The appearance of stupor some hours after a head injury indicates meningeal hæmorrhage and requires trephining at the point of injury if known, or at point indicated by cerebral localization; the middle meningeal being the usual source of trouble.

7. Even in very extensive injury to the head, operation should be made, since removal of *dèbris*, restoration of normal contour and cleaning of injured tissues can add but little to the danger and may save life.

8. In every case of doubt exploratory operation is justifiable.

9. Compound fractures, with or without apparent depression, demand enlargement of the wound and careful exploration.

COLD IN THE HEAD.

For cold in the head while in the acute congestive stage, there is no better remedy than gelsemium. One good large dose, say ten minims of the fluid extract, taken upon going to bed will effectually dispose of this troublesome and uncomfortable affection. One dose is usually sufficient.

PRURITUS ANI.

J. E. PRYOR, M. D.,
OCEAN CITY, N. J.

No local affection is more annoying and troublesome to a patient than this disease, and often the physician will be put to his "wit's end" to find means of relief. This disease is characterized by an intense, itching, burning and lancinating pain, in and around the anus, the pain often coming on in paroxysms, usually being much worse at night, after the patient has retired. The affection often extends to the surrounding tissues, the germs multiplying rapidly and burrowing in different directions, irritating the sensitive nerves, causing most intense itching. In a large number of cases, we find associated with it fistula in ano—hæmorrhoids, irritable fissure and small ulcers, each adding to the misery of the patient. A patient suffering from this trouble usually exhausts all local means he knows or ever heard of. He refrains from consulting a physician as long as he can, consequently he has become nervous, emaciated, and I may say, almost skeptical, as regards getting well.

The treatment of this trouble is varied, every physician having his own formula, besides every case must be treated on its own merits from the conditions presented. That which I have found most successful in a considerable number of cases, is as follows: When patient comes to consult me, I endeavor to get his confidence and instill him with hope, the bowels are freely opened with a saline purge, or calomel, and he is directed to report for a thorough examination, when such complications as fistula, hæmorrhoids, fissure, etc., are carefully sought for. Of course when any of these are found, they each call for their respective treatment. In a simple case of pruritis ani I order an injection of a solution of the following, which I have found to be a good antiseptic and local stimulant:

℞ Listerine ..... ℥iv
Glycerine ..... ℥vi
Acid Carbol. ..... gttxx
Aquæ ..... ad ℥vi

M. Sig. 3ss injected in rectum once daily.

It is necessary to medicate the internal sphincter and rectum in all cases of pruritis as there is more or less irritation of these parts. I also use the different ointments and antiseptic solutions, with good results in some cases and none in others.

Lately I have employed tincture of iodine. Before using, however, I direct the patient to have the bowels thoroughly moved, and an injection of warm soap and water to be taken, the external parts to be washed and dried. Then I apply the iodine thoroughly to the diseased surface, if it is too severe, a small amount of tr. opii can be added, or the parts may be covered by vaseline protected by absorbent cotton.

After having made from four to six applications, I begin to find my patient rapidly improving, or nearly recovered. I direct him to keep the parts clean, use the injection once daily, keep the bowels open, take plenty of outdoor exercise and eat good, nutritious food. Complications, if present, must be treated according to the regular surgical methods.

VINUM IPECACUANHÆ IN WEAK LABOR PAINS.

Stillmark (*St. Petersburger medicinische Wochenschrift*, No, 18, 1892,) contributes the notes of a case of uterine inertia in which the contractions was re-established by the administration of wine of ipecac. The patient was a IV-para, with a history of easy previous labors. Three weeks before the presumptive termination of her labor the membranes spontaneously ruptured and one or two weak pains were experienced. The next morning Stillmark examined her and found head presenting in second position, os admitting two or three fingers. There were no pains. The patient was placed in a bath. Nine hours later, as the pains had not yet occurred, warm vaginal douches were applied without result. During the following night patient slept. Next morning, after a bath, warm vaginal irrigations were again used, with gentle massage to the uterus. As all this failed to establish the pains, wine of ipecac was administered in a 15-drop dose. Half-an-hour afterward the patent exclaimed that her abdomen felt hard. At 1.30 P.M., 15 drops were again administered. In three-quarters of an hour, after the second dose, strong normal pains began. In the evening the pains were weaker, and about ten o'clock had almost ceased. Five drops were now given, as vomiting had occurred after the second dose. Energetic labor pains were soon established and at 12 o'clock the child was delivered. The placenta soon followed. —*University Med. Magazine.*

LACQUER POISONING AND NOTES.

By ALICE MAC LEAN ROSS, M. D.,

PHYSICIAN TO THE MICHIGAN WOMAN'S HOSPITAL, SWATOW, CHINA, FORMERLY RESIDENT PHYSICIAN IN WOMAN'S HOSPITAL, DETROIT.

The *Rhus Vernicifera* or varnish tree as it is popularly called, grows upon every hillside in this vicinity. In Japan and North China it attains the dimensions of a good sized tree reaching twenty feet or thereabouts in height, but here it is stunted and is not tapped for its sap. Its poisonous properties are well known and it is consequently shunned by both natives and foreigners, and most cases of poisoning are caused by contact with freshly varnished lacquer ware or bric-a-brac.

The juice is a resinous substance of tawny or dark brown color when fresh, turning jet black upon exposure to the light. Its characteristic properties are imparted to it by urushic acid, an irritant poison and a peculiar albuminoid which causes it to become externally hard on exposure to the air. The process of hardening takes place much more rapidiy in the presence of moisture, and in the process of manufacture, freshly lacquered articles are covered with wet matting to hasten the process of drying. The trees are cultivated in vast groves, and cuts are made in the bark from which the juice exudes and is gathered. Twenty pounds from one thousand trees is considered a good yield for one night. When applied as a varnish it is mixed with various substances, as pig's gall, vinegar and coloring matter known to certain guilds and clans, and its peculiar property is its hardness. It resists all known solvents and when old will stand almost any amount of violence without scratching or marring.

The susceptibility of different persons to the poisonous qualities of the lacquer varies greatly. Some enjoy perfect immunity, while others cannot enter a room where a freshly lacquered piece of furniture is standing, or pass a clump of varnish trees without experiencing headache, fullness of the head or vertigo. A tolerance can be acquired for it as seen by those who work with it and gather it, although the latter usually cover up face and hands while at work.

Contact of the varnish with the skin causes an eruption similar to that of *Rhus Toxicodendron*, and identical with that of cashew nut. Minute vesicles first appear situated upon a red and inflamed base. They are generally packed closely together and are accompanied by intense itching and burning and a good deal of pain. In from ten to twenty-four hours the deeper tissues swell to a considerable degree, closing the eyes if the face be affected, or rendering a hand useless. The vesicles coalesce forming good sized bullæ, and in about ten days, which is the usual course of the disease, dry down. The skin pulls off, the swelling disappears and no trace of the disorder is left behind.

In the matter of treatment the native Chinese doctors apply a lotion of cinnabar, a favorite application in all skin diseases. This it is needless to say does little good. Carbolized oil is very good, applied over the affected parts, and a carbolized emulsion of either sweet oil or peanut oil with lime water is excellent. In the last case which I saw, stupes of boric acid were applied and the part was bathed or immersed in hot solution of boric acid. This gave more relief than anything else. I regret not having grindelia orbusta in stock as that is said to be a specific in *Rhus Toxicodendron* poisoning. The similarity of the eruption and the close alliance of the species would warrant a trial.

My attention was called some time ago by Dr. Walter J. Orse, of Detroit, to a certain relation existing between complexion and laceration of the perineum and cracked nipples. My observations entirely coincide with his, and I am curious to know if others have observed the same thing. In red-haired women and those brunettes who have red lips, red cheeks, and are inclined to freckle rather than to tan, lacerated perineum and cracked nipples occur most frequently. And in those sallow skinned blondes who tan rather that freckle and who have a tendency to a deposit of pigment in the areola of the nipple, about the neck and armpits are least liable to suffer from these accidents. The first class seem to have friable tissues and thin skin, and the second, tough muscles and thick skin. Other women are liable to suffer or are able to resist as they lean toward one type or the other. This relation is to me marked, and is of value in prophylaxis.

Coffee as a beverage is an agent of considerable potency in drying up the milk of nursing women. In an institution of which I had charge recently in which there were some thirty or so nursing women, coffee was served twice a week. Regularly upon these days the nurses in charge reported a scarcity of breast-milk and there was frequently a necessity for resorting to artificial feeding to eke out. There is every reason why coffee should be an excellent agent in reducing the flow of milk, for caffeine is one of the best known duretics. I have not been able to ascertain the exact mode of action, and whether it is by reducing the amount of fluid in body through the kidneys I do not know, but it seems to have this effect in a marked degree, and is a valuable adjunct to other agents in reducing excessive flow of milk. In the lying-in period, and at the time of weaning, when the breasts secrete more milk than is wanted, and when the mother is abstaining from fluids, her thirst might be quenched with coffee (providing it does not interfere with her sleep), with good result.

Whooping cough is called the "hundred day disease" in Japan.

THE TREATMENT OF ABORTION.

When abortion is threatened, D. W. W. Seymour (*Am. Gyn. Journal,*) keeps the patient in bed, gives full doses of opium, and if necessary fluid extract of black haw. In the early stages this usually suffices. To control the hæmorrhage he uses a tampon of iodoform gauze, as it can be left in place longer without danger than any other material; however it is never allowed to remain longer than twenty-four hours. When abortion becomes inevitable he cleans out the uterus thoroughly. He precedes examination by a thorough antiseptic douche of the external parts as well as the vagina. If necessary he dilates the uterus with a mechanical dilator, never with tents, introduces a Martin's curette or a polypus forceps and removes its contents thoroughly. The success of his treatment is demonstrated by his record of one hundred and fifty cases, in which there was no death and no septic condition developed after the operation.—*Western Med. Rep., Canada Lancet.*

A NEW TREATMENT OF PROSTATIC HYPERTROPHY.*

By G. BETTON MASSEY, M. D.,
PHILADELPHIA.

A proper presentation of the subject of the electrical treatment of prostatic inflammation and hypertrophy is divisible into several general propositions and statements. The first and most important statement that I wish to impress upon you is that the methods about to be advocated may be relied upon as a successful mode of dealing with most cases of this troublesome affections. No method is worth the words to describe it unless this is more or less true, yet in this instance the claim of efficiency is specially noteworthy as the affection under consideration is generally regarded as incurable, and condemning its victims to merely mitigated misery for the balance of their days.

The second proposition may be put in the form of the question: Why and how does electricity cure these cases when properly applied? To answer this we must consider the nature of the morbid process and the character of the tissue involved, and apply to these facts the therapeutic deduction derived from the action of electricity in other analogous structures and affections. The prostate gland is a musculo-glandular body, the glandular tissue forming the bulk of its stroma, through which a multitude of muscular fibrils lace and interlace. The glandular tissue is in direct communication by continuity of structure with the glandular lining of the prostatic urethra. The affection under consideration—acute prostatitis and its sequelæ—does not differ essentially from such catarrhal affections as endometritis, rhinitis and other subacute inflammations of glandular mucous membranes; and most probably is caused or accompanied by the same microbic manifestations as those affections. The utility of the direct application of the galvanic current in combating the disease would therefore suggest itself to any one who has observed its value in endometritis. Of the suggestions to be derived from a parallel treatment of rhinitis I shall not speak beyond mention of a series of experiments now being conducted by the speaker which already prove that nasal catarrh is a field of vast importance to the electro-peutist. Mildly cauterant of morbid surfaces and stimulant to the tissue changes of the whole organ, the direct application of the galvanic current to the prostatic urethra is quickly beneficial in changing the character of the morbid process in the glandular tissue. In addition to this resolvent action, another element of remedial power lies in the contractile effect of swelling currents on the muscular fibres so liberally supplied to the organ. It is the development of this constringent power of electric currents in the hypertrophied gland that forms the chief feature of my method, and as it is a most important feature in certain cases I have felt amply justified in designating the method a new treatment, without detriment to the credit due among others, to one of the fellows of this society, Dr. Robert Newman, who has done so much to attract attention to the value of electricity in prostatic disorders. I have seen little or no mention of the prostate as a muscular organ, and a recognition of this important fact is, in my opinion, the keynote to the most successful management of prostatic hypertrophy.

This catarrhal inflammation and hypertrophy are manifested in an organ closely analogous to the uterus, and in its several varieties and consequences, such as hyperplasia proper, true fibrosis, and myo-fibromatous neoplasms. We have almost exactly analogous affections with those occuring in that organ. This being so, it merely follows that the curative treatment must also be analogous. Currents of five and eighteen milliamperes, while useful in combatting the more superficial prostatitis will not cure the hypertrophies. As in fibroids of the uterus, we must bring the hypertrophied and degenerated organ under the influence of from 20 to 70 ma. This I have done frequently, the active pole, negative, being within the prostatic urethra, and the indefferent pad on the back. The only precautions used, in addition to scrupulous cleanliness of the electrode and gentleness of its insertion, being that the current was not permitted to remain at its strongest figure more than a few seconds, as it was turned on and off at the controller to get the greatest constringing action with the least electrolytic irritation. If this be repeated not oftener than five days no irritation will re-

*Read before the American Electro-Therapeutic Association, October 4th, 1892.

sult, but rather a feeling of relief. In the intervals the same current strength is applied daily in the same manner through the rectal wall, the active electrode being an olive of proper size inserted into the rectum and pressed against the prostate, while the indifferent pad is on the abdomen. The primary faradic current should be used after the same method at each sitting, and I am inclined to look on it is an important adjuvant.

Under this treatment the shrinkage of the organ as a whole is soon manifest to the rectal touch, and as soon as a sufficient absorption of morbid products has occurred, with regression of interfering nodules and collars, the power and freedom of micturition will return.

During the progress of the curative treatment the catheter is passed as often as required, the instrument used for treatment serving the purpose of a catheter also at that sitting. Antiseptic flushing of the bladder is also not neglected at such intervals as the condition of the bladder demands.

A point of additional importance in the use of swelling currents of both varieties in prostatic disease is the fact that the expulsive power of the bladder is always below par in these troubles, sometimes overshadowing the condition of the gland itself, and for this condition the treatment described is of great value.

The effect of this treatment is greatest in the symmetrical enlargements of the gland, as it is in this variety that the muscular substance is capable of greatest response. In fibroid nodules in one lobe of the prostate the older method of continuous application is possibly the best, or we may resort to electro-puncture, though this last resort is undesirable on account of the difficulty of maintaining asepsis.

The instrument shown you is made from a silver catheter with large curve, which has been insulated everywhere with fused hard rubber except a bare surface about two centimeters long just back of the eye. Besides having the advantage of serving as a catheter, and thus saving double instrumentation, the eye at the end serves to notify us of the exact position of the bare spot previous to turning the current on. One of the chief advantages of this form of electrode is the ease with which it may be asepticised by heating in the flame of an alcohol lamp, the same heating permitting us also to repair any break that may have occurred in the thin hard rubber coating of the instrument.

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THE VALUE OF RESORCIN IN GASTRIC ULCERS.

In the *Provincial Medical Journal* for May 2, 1892, Pope, of Leicester, records the results which he has obtained in the treatment of gastric ulcer by means of resorcin, referring to a paper by Dr. Mackey, of Brighton, which was published in the *Lancet*, vol. i. p. 570, who treated fifteen cases by this method, using 5 grains three times a day. In Mackey's cases it proved very valuable in fourteen. Its employment is based upon the fact that it is antiseptic, analgesic, and hæmostatic. Pope believes that its analgesic property is most valuable, as by this means the stomach is able to tolerate food, when otherwise it would be excessively sensitive, ulcerated or eroded. The antiseptic effect which it produces is valuable in the prevention of fermentation.

The ordinary dose is 5 grains three times a day. Pope also states that he has found resorcin of value in gastric cancer. Under its use he has seen foul tongues become clean, and stomachs which formerly rejected almost all food become tolerant. Under these circumstances, however, it is a drug which modifies the symptoms rather than the disease itself.

THE TREATMENT OF ASTHMA.

Dieulafoy (*L' Union Médicale*, No. 48), says: At the onset of a paroxysm by means of a brush an application of a 5 per cent. solution cocaine hydrochlorate is made to the nasal fossæ as high as possible, or the throat may for four or five minutes be sprayed with the same solution. Should the attack not be aborted, from six to twelve drops of pyridine on a handkerchief should be inhaled. If the attack has reached its acme, a twelfth grain of morphine hydrochlorate is administered hypodermatically, if necessary repeated at an interval of a quarter of an hour. For the constitutional condition, potassium iodide, belladonna, and arsenic are indicated. In case of emphysema, baths of compressed air should be employed.—*Medical News.*

REMOVAL OF FRAGMENT OF BONE FROM ŒSOPHAGUS THROUGH THE PHARYNX.

A. L. BENEDICT, A. M., M. D.,

ATTENDANT, DEPARTMENT OF GENERAL PRACTICE AND DIGESTIVE DISEASES, FITCH DISPENSARY; CONSULTANT IN DIGESTIVE DISEASES, INGLESIDE HOME HOSPITAL, BUFFALO.

Last month I was called to attend a married woman, aged 50, who said that at breakfast four hours before, she had tried to swallow a piece of meat which had lodged in her throat. The patient had drunk beer with the hope that it would nauseate her—according to her own statement. Other members of the household informed me, however, that she was in the habit of drinking considerable, though she was not positively intemperate. She was in a nervous, almost hysterical state with the feeling of something lodged in the throat at about the level of the greater cornua of the hyoid. A laryngoscopic examination showed that the throat was clear but that there was some chronic pharyngitis, that the tonsils were enlarged and that there were masses of tonsillar tissue on either side of the base of the tongue which might have acted as irritants and which, I was inclined to think, were the cause of the symptoms of which the patient complained since she was certain that she had swallowed no hard substance and that there was no bone in the meat of which she ate at breakfast. Accordingly, after prescribing an astringent gargle and administering a gram dose of potassium bromide, I was about to leave the house when the symptoms became aggrated, the patient gagging and breathing with difficulty. A digital examination of the pharynx and œsophagus was then made, the patient having the least irritable throat which I have ever encountered. The epiglottos, rima glottis, arytenoid cartilages, tonsils and other parts of the throat were carefully explored and then the finger was passed into the œsophagus as far as it would reach and it just touched the upper part of some foreign body. An attempt to remove the obstacle with long curved forceps failed. The patient was then placed face downward on a bed with the head hanging over the edge. Partly by the aid of my finger in the throat, partly by the patient's efforts at vomiting, the foreign body was removed. Notwithstanding the patient's previous statement, it proved to be a fragment of a pork rib, one inch long, three eighths wide, rounded at one end, sharp at the other. No unpleasant after-effects were noted.

CALOMEL IN HÆMORRHOIDS.

For a number of years Dr. J. B. James, of London, has treated hæmorrhoids by the simple process of applying calomel to them with the finger, and claims to have done so with marked success in every case, particularly when the hæmorrhoidal mass was inflamed, which is characterized by mucus discharge and hæmorrhage, accompanied by a painful sensation of weight in the region of the rectum. All these symptoms, it is alleged, were speedily relieved by the simple application of the calomel, which had the still more important subsequent advantage of restoring the patient to perfect ease, enabling him to pursue his usual occupation in happy immunity from all distressing or annoying symptoms.—*Merck's Bulletin*, May, 1892, p. 277.

BORATE OF SODA IN EPILEPSY.

Dr. Mairet finds that compared with the bromide of potassium, the borate of soda is of real value in the treatment of epilepsy. The attacks decrease under its use, and may be suppressed even for many months at a time. It acts better than the bromide of potash in symptomatic epilepsy. The bromide, on the contrary, gives better results than the borate of soda in nervous epilepsies, and in cases of this order it is only when the bromide has failed that borax should be tried.—*Le Progrès Médical.*

PRURITUS ANI.

Dr. Balfour (*Norsk Magazin for Lægevidenskaben*, No. 1, 1892) employs the following formula with success in pruritis ani:

℞ Calomel.....gms. 5.
Vaseline.....gms. 50.

Instead of vaseline one may use lanoline, which of itself acts well in pruritus.

Society Reports.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of September 1st, 1892.

The President, Dr. W. H. H. Githens, in the chair.

Dr. Joseph Price presented a paper on "Section for Removal of Tumors Following the use of Electricity." The doctor said that, with our abundant and continually increasing data, we are growing in ability to discuss the question of the value of electro-therapeutics in gynecology with more intelligence. Just where the claims of the electricians are to stop is problematic. The utter failure of many of their claims does not seem to embarrass them. We are led to believe that there is no abdominal or pelvic trouble that the galvanic current is unable to cure. The method of treatment, the operative work, of none of us is uniformly successful, but our surgeons in their work have results that speak for themselves—while in the electric treatment, the failures are repeated and signal. To start with, the treatment is troublesome and tedious, much more so than surgical operation, and it delays, prolongs and generally complicates, where prompt surgical procedure expedites and saves. Up to date, the advocates of the electrical treatment have not furnished a single instance in which the tumor has disappeared, where the disappearance could positively, beyond reasonable doubt, be credited to electric treatment. At the meeting of the American Gynecological Society, held in New York in September 1887, Dr. Apostoli was asked the pointed question: "Have you ever seen a tumor disappear under your treatment?" His answer was manly and frank, "I have not." All he could claim, all he did claim, was amelioration of symptoms. Opium will ameliorate symptoms and at the same time have a like effect with electricity in complicating the trouble. In tumors the claim is "reduction in size." The surgeon's claim is total extirpation, and restoration to health and usefulness. Another claim is "greatly benefited." This could be done by careful general treatment, keeping the bowels open, rest, particularly at the periods.

An eminent English gynecologist says, "The changes following galvano-puncture will be found immediately around the seat of puncture, but similar changes would follow if the thermo-cautery or red-hot iron had been used. In any case the changes are extremely local and do not extend into the substance of the tumor. In some cases the current has no effect whatever on the tumor. In other cases it causes sloughing. This was followed sometimes by absorption of the tumor and sometimes not. In either case the patient was subjected to all the danger of peritonitis, septicæmia, thrombosis, embolism, etc."

An electrician claims that in the treatment of extra-uterine gestation, "it stands with a record unblemished by a single failure or any dangerous consequences." Now, on the subject of extra-uterine pregnancy, Mr. Tait, with the characteristic bluntness of the surgeon, says, "To apply the electric current to every kind of a lump in the pelvis under the suspicion that it is an extra-uterine pregnancy, would be a most haphazard, dangerous proceeding, worthy of the strongest condemnation." He "considered the use of the electric-current as one of the most nonsensical proposals that had ever been suggested to a surgical audience." He said that it was absurd to attribute the maceration of the fœtus to the electric current. When rupture took place, he often found a macerated fœtus, with bones extensively laid bare. In that case the fœtus must have been dead for weeks before the current was applied. And as to the growth of the placenta, the cases he had seen were those in which he had found a macerated fœtus not more than ten or twelve weeks old, while the placenta was the size of a four months' pregnancy. This opinion was confirmed by Dr. Berry Hart and Mr. Knowlsley Thornton.

As to the diagnostic properties and functions of electricity, there is solid ground for our scepticism. Operators with a varied and extended surgical experience and with a clinical knowledge of the multiple nature of pelvic and abdominal disease, have a right to question the ability of the great majority of the followers of the electric treatment to diagnose pelvic and abdominal disease within defined lines of reasonable certainty.

DISCUSSION.

Dr. G. Betton Massey said that as he did not hear the first part of the paper, he wanted to say that his remarks are to be taken in ignorance of the first half of the paper. The paper clearly shows that Dr. Price is opposed to electricity in gynecology. He preferred to see cases from a surgeon who takes that stand, for he had been so unfortunate as to have had some cases from surgeons who believe everything is good and that they are good for everything and that they had as good ability to apply the delicate and powerful agent electricity for the cure of bleeding and large tumors as they had to cut the tumor out with a knife.

The portion of the paper that he heard was simply an attempt to hold up to derision, the claims made for electricity in the cure of fibroids and also the explanation of those claims; but so far as he could see it the derision was merely in the sense that you choose to take it. The claims which were held up to derision, he wished to stand by and point out as true in skilled hands. A man can not get up and say that there is nothing in electricity unless he can tell the difference between the effect of the positive and the negative pole properly applied. He shows that he is ignorant of the first principles unless he can discuss them.

It is folly for any one to compare the removal of the ovaries in fibroid cases with the administration of electricity. The one has been demonstrated by those who have mastered the subject as almost invariably valuable—that is, nearly one hundred per cent. of the cases are benefited more or less. The other, the removal of the ovaries is a pure experiment. Who can say of any given case, that it will be better at the menopause? Hence, who can say that after the removal, the dangerous removal, of these inoffending organs the patient will be better. He knew himself from considerable experience that oophorectomy for fibroids is largely an unnecessary experiment and largely a failure.

And as to the electrical treatment: should any one wish to know about that they should not stop at the opinions of an opponent. He had treated sixty-eight cases of fibroid tumors with electricity, some not well adapted to that agent, as it is now well conceded that there are certain tumors that are not well adapted to the use of electricity. Of these sixty-eight cases, sixty-four were decidedly benefited in spite of the fact that many of them were treated before the time had arrived when he knew how to select these cases. Sixty-four cases were satisfied not to undergo any further treatment, and were satisfied as to the money and time spent. From the point of view of the arrest of the growth, he believed from his present information of these sixty-four cases, that the growth has been permanently arrested. They are therefore successes in that point of view. They have all been successes from the point of view of the removal of pain and pressure symptoms. They were nearly all successes from the point of view of reduction in size, many of them being largely reduced, although he warned them that such good results can only be gotten by patient work.

In these sixty-four cases, the tumor totally disappeared in seven. In one the tumor was as large as his head. That case has been thoroughly spoken of and reported in another society. In view of that statement it seems folly for any sensible man to say that the electrical treatment of fibroid tumors is unwise and is useless. He was prepared to exhibit that patient to any one who wishes to see her and also to furnish the measurements taken by her physician when she was first placed under his treatment.

Dr. B. F. Baer believed that we want the truth in regard to electricity in the treatment of fibroid tumors and its effect on subsequent surgical treatment. In his own experience he had found that the most difficult cases of fibroids that he had operated on had been cases that had previously been treated by electricity. He did not wish to state that the electric treatment was the cause of the case being the more difficult, because he could not prove it, but that not only did electricity fail to cure these tumors, but, for some reason during the conduct of the treatment, these patients had from one to a dozen attacks of peritonitis around the tumor. The growths were universally adherent. One sloughed and one contained a large quantity of pus and three had evidence of inspissated pus around the tumor. In no single case treated by electricity had he seen more than temporary benefit result. He thought that Dr. Massey had no right to claim that the patient was benefited by

electricity and would not have been benefited by the remedies which long ago we learned would benefit these cases, such as the application of some stimulus, as of iodine, or the curette, safely and mildly applied. These agents we used long before electricity was employed or hysterectomies done. We benefited these cases. We modified the hæmorrhage and in some cases thought that we cured the hæmorrhage by remedies applied to the interior of the womb. With the curette we did harm in many cases, but we controlled the hæmorrhage. We did the same with ergot, chloride of ammonia, rest, clay-pads.

After his last year's experience, he would use surgery instead of electricity. If any friend of his requested treatment, he should emphatically urge surgery even in small tumors.

In regard to what Dr. Massey said with reference to oophorectomy. This does not give the good results he once thought that it did, or hoped that it would. In his own experience oophorectomy for fibroid tumors had not been a successful operation. He could not see why he should use oophorectomy when hysterectomy is so easy. He should feel that the patient was safer after hysterectomy than after the ovaries were removed.

Dr. Joseph Hoffman said that in the treatment of fibroid tumors by electricity it will always be a question as to what the electricians mean by a fibroid. He thought Skene Keith quite as good an authority on electricity and its application to fibroids as other gentlemen who claim as much he does. Dr. Hoffman did not believe that there were five consecutive cases in the last book that Dr. Keith has written that would be accepted by the surgeon as cures of fibroid tumors such as Dr. Price exhibited. At one of the last meetings of the Society, Dr. Massey had reported a case of tumor diminished by the use of electricity—a one-sided tumor the nature of which was puzzling. But, to everyone in the society except the electrician, it was clearly a fæcal mass in a distended colon. If, in a case like this, there is doubt in the electrician's mind as to what he is treating, is there not good reason for doubt in the mind of the surgeon that some of these cases, regarded as fibroids, are something else?

Then again about time. Time is in many cases an important element. It is an important element not only to the electrician but to the woman and to the surgeon and Dr. Hoffman held that if a radical cure can be demonstrated as possible in the great majority of these cases, operation is from the point of time preferable, since the mortality comes down to almost nil.

Another point, the desire to do hysterectomy and the frequency with which it is done. If the two books, the one by the elder Keith and that by the younger Keith, are compared, no one in his senses can challenge their relative importance. The one is an earnest, successful, scientific work, the other is tentatively trying experiments. The one gives results, the other asserts that he gets results but there is nothing in the way of proof. Remember that the surgeon does not do a hysterectomy in every case.—The argument seems to be that every case that presents itself to the electrician has just escaped the surgeon by the skin of its teeth. Such is not the fact. He had walked by the side of Dr. Price when he did not do hysterectomy. It was a scientific point to be settled and the result has been one of weighing the chances, considering the nature of the tumors and the condition of the patient—the weighing of the power of electricity to do mischief or to afford benefit.

He agreed with Dr. Baer that he had seen an abscess containing quarts of pus started up by electricity. He had too a vivid recollection of a case in which this undoubtedly was a fact. A large fibroid tumor without any symptoms whatever treated by electricity, followed by the formation of pus and death. The smaller tumors are the most easily removed. The larger tumors are the dangerous ones and still there has been a great deal said about the choosing of the tumor to which electricity is to be applied. There is no electrician living who can tell when he has a tumor to which he can apply electricity without harm and danger to the patient—this agent which is believed to be so harmless.

Dr. George I. McKelway said that before saying anything in regard to the subject under discussion, he wished to do Dr. Massey the justice of correcting a mistake that Dr. Hoffman had made. In the case of the fæcal mass, Dr. Massey did not diagnose it a fibroid tumor, but sarcoma of the ovary. He thought that Dr. Massey should have the justice of the correction.

He had been a member of this society for years but he had been a quiet one. He thought that this was the first time that he had opened his mouth in it. He had listened quietly and had thought patiently of many things. Sometimes he had been instructed, sometimes amused, sometimes he had been provoked and sometimes he had been surprised. It was largely in the line of the discussion of electrical matters that he had been surprised.

There are some words that are words to conjure with. We have a striking example of that just now not only in this country but all over the world in bichloride of gold. If Keeley had talked about the bichloride of lead he never would have had any one come to be cured. If he had talked about bichloride of tin he never would have been heard of. He talks about bichloride of gold and people flock by multitudes.

It is much so with this word electricity. It is a great thing. People think of Edison, of the Atlantic cable. Electricity is a word to conjure with and it has been conjured with a great deal.

Something has been said about the amelioration of symptoms. He had seen symptoms ameliorated in a most surprising way by a hypodermic injection of ten minims of water.

He did not want to discuss a thing the discussion of which he had condemned, but it had always seemed to him a little peculiar that this society or any society like it, supposed to be a scientific society, should give its time, meeting after meeting, to the discussion of the use of electricity in gynecology.

Dr. Joseph Price said that Dr. McKelway had covered beautifully some points in condemnation of just what he had been condemning; he felt that he owed the Society an apology for squandering its valuable time, but he had dealt with a huge number of tumors during the past summer and he felt that the surgery was greatly complicated by the use or the abuse of electricity and wanted to have a full and complete discussion of the subject that they might have a more accurate knowledge of the mischief done by electricity.

In regard to sloughing-fibroids, the electrician can assert that under any treatment, or without treatment, fibroids may slough and become gangrenous. This is true, but the larger number behave badly, slough, become adherent and undergo retrograde changes after the application of electricity. His position is that of Dr. Baer, of all of us in fact. Years ago we were timid, we were cowardly. Now Dr. Baer removes a fibroid-tumor because he feels that it is his duty to do so and because he knows how. He feels that it is his duty to remove it early, while the patient is in good health and all the conditions are favorable to a speedy recovery.

An allusion has been made to surgery. Much of the fibroid-surgery is bad. It begins in doubt and ends in disaster. Some of our operators are not prepared to do hysterectomy. We have had much discussion about pedicles; why should one who makes a pedicle discuss the subject with one who does not know how to make a pedicle? He could not do a hysterectomy without making a pedicle. The man who delivers a big fibroid with a pedicle as large as his coat-sleeve and places a clamp around it and screws it up and says he has difficulty in closing the incision and has to make a pedicle out of the tumor is one that knows nothing about hysterectomy. Unless he can go to the internal os and make a small pedicle fitting the lowest angle of the incision, he knows nothing about hysterectomy. The man who has never done a complete-extirpation has no right to discuss the subject with one who has done it a number of times. The man who never dropped the pedicle cannot discuss the subject with Martin, who drops them all. The man who has not made a complete-extirpation cannot discuss the subject with Dr. Baer who has done it a number of times.

Coming back to the pathology which is the most important point in the natural history of fibroid tumors, the pathology has changed greatly in the last thirty years. The pathology of all gynecology has changed. In Africa these tumors are unknown. In America they are exceedingly common. In Sir James Y. Simpson's clinic thirty years ago, they were scarcely seen. Now in Edinburgh they are numerous and behave badly. The same is true in his own experience. He was not prepared to say why this is so.

Dr. Massey claims benefit in nearly one hundred per cent. of the cases and then he tells us that a number of the sixty-five cases were not suitable for electricity; they had passed that period. It will be

interesting to know what became of these sixty-five cases. One of the ladies with a huge tumor whom Dr. Massey had treated was in his office and had it not been that two prominent electricians had discouraged this woman as to the prospect from surgery, she would have had the tumor removed. It is a common practice with some physicians to tell patients not to let any one touch them with a knife, saying that even if the abdomen is opened, the tumor cannot be removed. He had never in his office condemned electricity or any other treatment, except that he had advised patients to leave matters alone.

Dr. Marie B. Werner presented a paper on the "Analysis of Some Statistics on Supra-vaginal Hysterectomy." The Doctor stated that the three methods of treating the stump are meeting with varied results in the hands of different operators, and it becomes therefore an important matter to study method and operator together. The intra-peritoneal seems theoretically the ideal, but the general results fail to show the low rate of mortality necessary to place it foremost. Bantock abandoned it after careful study, on account of the great mortality. Schroeder and Martin both had a high mortality by this method and Martin abandoned it for total extirpation. The fact remains and must be always kept in mind, namely, the want of reliability in the ligature and the peculiar nature of the uterine tissue. The extra-peritoneal method gives the lowest rate of mortality and for this reason the method is the most promising. All the details are of paramount importance in this operation if it is to be successful. The operator must be prepared for every emergency before beginning to operate and complete the operation, when once begun. The doctor insisted on the complete removal of the tumor. She stated that there were several cases on record in which a portion of the tumor was allowed to be expelled through the abdominal opening. The danger of sepsis is very apparent. The ligatures should always be applied to healthy structures and this holds good in hysterectomy as well as in the removal of diseased appendages. The operator should work aseptically, surely and rapidly (consistently with good judgment) leaving if possible no ragged surfaces for subsequent sloughing. A small extra-peritoneal stump always gives the best results.

When the growth has originated low down in the uterus and developed laterally, filling up the pelvis, it is a difficult task to make a stump. Anatomical relations are to be studied and kept in mind, the tumor raised as much as possible out of its bed, adhesions released and properly cared for, the peritoneal covering incised three or four inches above the point where the nœud is placed, then stripped down; the enucleation of the tumor becomes an easy matter, comparatively, and the nœud is placed around uterine tissue and not fibrous. Not only is the stump much reduced in this manner but the danger of hæmorrhage and sepsis is minimized; there are still two other complications which are easily avoided by so doing: injuries to ureters or bladder.

Chrobak's results with total extirpation have certainly been most promising—four, with no deaths—and also in his later modification of retro-peritoneal fixation treatment of the stump—thirteen without a death. He abandoned total extirpation for the latter method on account of saving the time. E. Albert, of Vienna, reports fifty cases with three deaths, the stump treated in the way that Chrobak recommends. In total extirpation there are still some points that time alone will settle; the ultimate behavior of the bladder and vaginal roof, since both have often been much stretched and displaced by the growths removed.

DISCUSSION.

Dr. Joseph Price said that the discussion of the pedicle was always of interest and importance. The method of transfixion and the use of the wire or ligature were at first imperfect, but later the application of the ligature was perfected. Some operators, as Dr. Cushing, of Boston, prefer the elastic ligature and, Dr. Price did not know but that he succeeds better than with the wire. When constriction is depended upon, the ligature gives a constant and continuous pressure. With the application of the wire you have shrinkage and have to screw up the clamp. Hysterectomy is a piece of civil-engineering. He could not have done this work without special training. Applying forceps to serve as land-marks, you drop down the capsule and, beginning with a pedicle as large as your coat-sleeve, you end with one as large as your thumb. You need

not fear hæmorrhage. The elastic-ligature is not necessary. It prolongs the operation. In almost any method of hysterectomy you can get along with a few hæmostatic-forceps without the temporary clamp. There is a certain amount of work in the use of temporary-constrictors that you have to do over again. In cases of multiple-fibroids it is of great importance that the pedicle should be made in the way described. The bladder may come up between two of the tumors and unless you strip off the capsule until you come to the cervix there will be risk of catching the fundus of the bladder. In one of his cases he included the fundus of the bladder but the patient recovered. Mr. Tait did it in Albany but the patient recovered although there was a fistula which lasted for months. After applying the wire you must bring in the margin of the capsule and let it be caught by the wire.

Dr. Joseph Price also reported several cases of extra-uterine pregnancy. He stated that he would refer to *tubal* pregnancy only, as he believed it to be the only variety, although, after rupture, it may be found anywhere in the pelvis or abdomen. He referred briefly to some of the most prominent points of this murderous accident—First, that it is common and on the increase. Secondly, that it is easy of recognition. Thirdly, that there is but one treatment. As to frequency: Pathological conditions favoring its occurrence are distressingly common and on the increase. From his experience he would say that tubal pregnancy was much more common in the cities than in rural districts. In regard to early recognition or diagnosis, he now worked by a method of exclusion, looking first for tubal pregnancy—as the most serious and dangerous trouble a woman can suffer with. Second, for appendicitis. Third, for pus in tubes or ovaries. Fourth, for suppurating dermoids, twisted pedicle, etc. He rarely failed to recognize tubal pregnancy where it exists. He thought it only fair to say that the general practitioner has given and is giving this vital subject much careful reading and thoughtful consideration. He is generally the first to see this class of cases and the skillful general practitioner is not slow in recognizing the existing trouble and is prompt to call in surgical aid.

Elliston J. Morris, M. D.,
Secretary,

Abstracts.

DYSTOCHIA FROM IMPACTION OF THE SHOULDERS.

Dr. Kortright says: That difficulty of delivering the shoulders after the birth of the head does occasionally occur, the following list of accidents will prove: Rupture of the fibres of the sterno-cleido-mastoid muscle with subsequent abscess of the neck, injury to the brachial plexus followed by temporary paralysis of the arm, fracture of the shaft of the humerus or separation of its epiphysis, cerebral effusion, or asphyxia, with consequent death of the child. Incredible as it may seem, the head of the child was torn off in endeavors to deliver the trunk when the shoulders had become impacted.

We frequently find multiparæ of the following character: They are wives of poor men and have borne their husbands from four to nine children at the regular tenement-house interval. In their youth, they were slender girls of less than the average height and have married early. Their sylph-like proportions have long since disappeared so that they present the large limbed, full bosomed cuboidal aspect with which we are all familiar. Repeated child bearing has caused separation of the abdominal recti, weakness of the oblique abdominal muscles, subinvolution of the abdominal walls so that the uterus falls forward when enlarged, and what they call their high stomachs become markedly accentuated during pregnancy. There may be no suspicion of rachitis about them, but their pelves are very shallow, the pubic rami widely divergent and one or all of the pelvic diameters small. When they stand erect, the axis of the uterus is nearer the horizontal than the perpendicular. If one has occasion to remove an adherent placenta from such a uterus he will be painfully impressed by the extreme extension of the hand necessary to reach the interior border of the placenta, or the anterior uterine wall. These women, bear, as a rule, large children which frequently present in the occipito-posterior position.

When such a person comes in labor, the head engages badly, progress is slow, and even if the forceps be used the uterus is in a condition of partial inertia by the time the head is delivered. The pains are in-

efficient to deliver the large body. One shoulder is caught above the symphysis at the angle of the parturient canal, the other is at the promontory of the sacrum or slightly below it. The head of the child is extended and laterally flexed at a right angle to the trunk.

It is just this condition concerning which so little has been written and the best management of which is not to be found in any text-book. It is plain that this position of the child is one of great danger; for the pressure of the maternal parts upon the body of the child without any corresponding pressure upon its head soon leads to death from asphyxia or effusion within the skull. We are all familiar with the cyanotic face and the pouting lips of a child in this position. Jacquemier, the first to mention this variety of dystochia, treated it by bringing down the arms and extending them over the head, but this method is acknowledged by himself and others writers to be difficult and to cause fracture of the arms. Hodge advises pressing the child's neck against the symphysis and in this manner bringing the posterior shoulder to the edge of the perinæum. When the posterior shoulder appears the child is to be carried backward and the anterior shoulder disengaged. Parvin advises traction with the finger in the axilla of the perineal shoulder or with the finger in each axilla. Lusk advises traction upon the sides of the head, or with the finger in the axilla. Mann advises pressing the neck backward upon the perinæum with traction till the anterior shoulder appears under the symphysis, and then forward pressure till the posterior shoulder is born. This is all that is written upon the subject.

By means of any of these procedures we would be able to deliver in the great majority of cases, but in none of them does the proper rationale obtain. How does nature relieve herself in this condition? In the *Medical Recorder*, vol. 37, p. 444, may be found the report of a case of impaction of the shoulders in which the pains were strong and delivery took place without external aid. In this case restitution was toward the right thigh of the mother. The face then turned backward toward the perinæum until it looked toward the left thigh. By this semi-revolution the posterior shoulder passed under the symphysis pubis and the anterior shoulder passed into the hollow of the sacrum. The mechanism was exactly analogous to that which obtains in most cases of occipito-posterior presentation of the vertex. This spontaneous rotation then is nature's solution of the problem and should furnish us a proper basis of treatment. Bearing in mind that the shoulders engage in the oblique diameter of the pelvis we should endeavor to rotate the child in the direction of the least resistance. And this direction will be that in which the anteriorly lodged shoulder passes away from the medial line of the mother and not toward it.

In practice this rotation will be best accomplished in this manner: Introduce the finger of the hand corresponding to the maternal thigh toward which the child is looking. If the restitution has been toward the right thigh use the right hand and conversely. The finger thus introduced will enter the axilla of the posterior shoulder on its dorsal aspect. Pull the shoulder sidewise and toward the symphysis. Do not push but pull. Make the dorsal side of the posterior shoulder the advancing surface. In this way the anterior shoulder is pushed away from the symphysis and is not crowded against it. Passing into the transverse diameter the shoulder glides into the hollow of the sacrum, thence to sweep over the perinæum.

This proposed method of unlocking the impacted shoulder is not mere theoretical reasoning, but has stood the test of actual experience. Previous to its adoption I had had one case of paralysis of the arm from injury to the brachial plexus caused by traction on the head. I had also lost a child from asphyxia during delay while trying in succession the methods given in the books. Since the adoption of this manœuver, I have had neither accident nor difficulty.

In the discussion Dr. Jewett after speaking in terms of high praise of practical nature of Dr. Kortright's suggestion says: In regard, however, to the management of the complication to which the paper alludes, I have been accustomed to depend upon a method something like this: When the posterior shoulder presents I lift the head well toward the mother's abdomen. I then place the fingers in the posterior axilla and lift that shoulder over the edge of the perinæum, pushing the perinæum gently back. The posterior

arm can then be released. When this has been accomplished, the other shoulder may be delivered usually with no difficulty. In other words, I deliver in detail, the entire bisacromial diameter never being allowed to engage at one time. This method has always served my purpose; yet I fully recognize the fact that there may be cases so difficult that it may fail; and I heartily commend the method of Dr. Kortright and shall hold it in readiness for use when the other does not serve.—*Brooklyn Med. Jour.*

THE CHOLERA, AND HOW TO PREVENT IT.

(ISSUED BY THE TENNESSEE STATE BOARD OF HEALTH.)

To prevent cholera, every one must help. The State Board of Health may issue circulars, and the local authorities may vigorously enforce regulations, but if each householder will not heartily co-operate in removing the causes which breed cholera and similar diseases, the pestilence, should it come, will be rendered many fold more disastrous than if otherwise. The following instructions have been drawn up with care, and explain what ought to be done:

1. To prevent cholera, it is necessary to remove the unsanitary conditions which give fatal activity to the cholera poison.

2. To keep a good heart and a cool head, and observe strictly the laws of health.

"A Dervish, traveling over the desert, met the Cholera, to whom he said, 'Where are you going?' The Cholera replied, 'I'm going to Bagdad to kill 20,000.' Some time after the same Dervish met the Cholera returning, and said, 'You vagabond, you killed 90,000.' 'No, no, said the Cholera, 'I killed 20,000; fear killed the rest.'"—*Oriental Legend.*

3. Prompt attention to all looseness of the bowels will generally prevent an attack of cholera. "To arrest diarrhœa is to prevent cholera." When cholera is about the slightest diarrhœa should be instantly checked. A good diarrhœa mixture, which every one should keep in the house, should be taken at once, a doctor should be sent for immediately, and all evacuations should be disinfected as if the case were one of cholera.

4. The unsanitary conditions which enable the cholera germ to become fatal are: (*a*) A tainted water supply; (*b*) foul privies or cess-pools; (*c*) foul ash-heaps; (*d*) damp, ill-ventilated houses; (*e*) defective drainage, ill-trapped sinks and imperfect sanitary appliances; (*f*) filth in any form.

All springs and wells should be inspected, even if their water is bright and sparkling, for then it may be most dangerous. All suspected should be filtered and boiled. All tainted wells and springs should be closed, and whenever a cholera case is reported all drinking water drawn from rivers, springs or wells should be boiled for half an hour. Filtration is good, but it is best to boil afterward. Cisterns should be cleaned at short intervals, and so situated as not to be in close proximity to either drains, privies or cesspools, particularly so if built underground.

Cesspools, or foul privies, are nests for breeding pestilence, and centers for poisoning the earth, the air and the water. It is chiefly by their leakage into wells and underground cisterns, and their overflow into springs, branches and rivers, that they contribute to the propagation of cholera.

7. Damp, dirty, overcrowded houses predispose their inmates to attack. All low-class tenement property, outhouses, cellars, etc., should be thoroughly limewashed; back yards should be frequently cleansed and disinfected; fresh air and sunshine, if possible, should be let into every room daily. Where there is a smell in any room which cannot be removed by opening the window, something is wrong, which ought at once to be put right, or mischief may follow.

8. The careful disinfection and prompt subsequent removal of dirt, filth, and decayed matter of all sorts, the vigorous use of soap and the scrubbing brush, the constant ventilation of all sleeping and living rooms, and immediate attention to all foul smells, always important, are never more so than when the cholera is hovering around.

9. The ordinary rules of health should be strictly observed in (*a*) cleanliness; (*b*) moderation in all things: (*c*) avoidance of all sources of cold and indigestion. Every one ought to wash from head to foot at least once a week, and the oftener body linen and bed clothes are changed the

better. Never eat with unwashed hands, especially when cases of diarrhœa or cholera are in the house. In the latter case some disinfectant should be added to the water before washing, and food should never be taken in the room with the patient.

10. To minimize the danger of infection it is well to be moderate in all things, particularly avoiding all excesses in drinking, in eating, or in exercise. Excess in drinking, sometimes resorted to from a mistaken idea of warding off the cholera, has the exactly opposite effect. Spirits are useless as a corrective of impure water. Excess in eating, by disorganizing the digestion, predisposes to diseases of the digestive organs, of which cholera is the worst. Eat well, but wisely, and avoid all unripe fruit, indigestible or tainted food, and everything that disagrees with you. Excessive exercise is dangerous, by producing exhaustion; so is prolonged bathing. Everything that causes exhaustion is bad. Avoid all sudden chills, especially when perspiring. Flannels should be worn next the skin. A flannel belt round the waist is strongly recommended. Avoid draughts and late hours, and always wear enough clothes to keep the body warm, especially at night.

11. When cholera or diarrhœa exists in the neighborhood of dairy farms, avoid milk coming from that district, and if other milk cannot be obtained, condensed milk is safer than fresh milk from infested districts.

12. If from any source a case of cholera should develop in any locality in Tennessee danger of its spreading may be minimized by (*a*) immediate isolation of the patient, (*b*) complete disinfection and instant removal of all excretions and other matters that come from him, (*c*) burning or thorough disinfection of all clothes, bedding, etc., soiled by cholera discharge.

13. Cholera secretions should be regarded as more dangerous than strychnine. The vessels into which they are discharged should always contain carbolic acid or other powerful disinfectants; they should be immediately emptied, and the privy, water-closet, sink or drain down which their contents are thrown should be flushed at least once a day with carbolic acid and water, chloride of zinc, sulphate of iron, or other equally effective disinfectants. Do not spare the disinfectants, especially in the case of privies and cess-pools.

14. All clothing, carpets, sheets, towels, etc., which have come in contact with a cholera patient should, if possible, be burned at once. On no account should they be sent to a public laundry or washed in common with the clothing of others. If not burned, before they are sent put them in a tub of boiling water mixed with carbolic acid, and afterward have them, as well as the furniture, etc., thoroughly disinfected by the free use of the fumes of burning stick sulphur, continued for at least four consecutive hours.

15. Do not be frightened. For one who dies of cholera in the worst years two die every year of typhoid and similar preventable diseases. No one who gets into a panic gives himself a chance. Doctors and nurses who are constantly attending cholera patients do not die in greater proportion than others. Prompt treatment of the disease in its early stages is almost always successful.

Please read this document with care, and try to remember the principles involved, and then preserve it for future reference.

TREATMENT OF PYOGENIC AFFECTIONS BY PRODUCTION OF ARTIFICIAL ABSCESSES

Fochier (Lyon) has recently suggested the production of artificial abscesses, by the subcutaneous injection of essence of turpentine, as satisfactory treatment for certain cases of infection. In a number of grave cases of puerperal infecton and of pneumonia he thinks he has seen recovery due entirely to this treatment. Dieulafoy (*Sem. Med.*, March 30, 1892) reports a desperates case of pneumonia successfully treated by Fochier's method. In his case subcutaneous injections of 1 gramme of essence of turpentine were given in each of the four limbs; the following day there was marked improvement in the condition of the patient. L. Bard (*Lyon Med.*, April 17, 1892) reports a grave case of pneumonia where recovery was undoubtedly due to the production, artificially, of abscesses.

MENORRHAGIA.

℞ Tinct. cannabis indica.....gtt. xxx.
Mucilage.....
Spts. chloroform āā.....5 i.
Aquæ, ad.....5 ij.

M. Sig.—Take a tablespoonful every three hours. A few doses are sufficient.

—E. E. Philips, *Med. Summary.*

CHOLERA NOTES.*

MARIE B. WERNER, M. D.,
PHILA.

In Hospital St. Antoine (*Bull. Med. 1892*)—each cholera patient receives a bath on admission, temp. 40° C, lasting from twenty to thirty minutes, to which mustard is added in the latter stage; should reaction fail to take place, transfusion is resorted to; 1500 grammes of artificial serum, 38° C. (Aq. dest. 1000, natr. chlorat. 6, natr. hydric. .05.) This treatment does not include those grave lightning-like cases. Systemic treatment is as follows: 1st Absolute dieting—2nd (a) Sol. acidi. lactici 15:1000, two liters daily—(b) Tea with rum; ice; Seltzer water. (c) For persistent vomiting the stomach is washed several times daily with boiled water, and then filled with 500 grms. of lactic acid solution. (d) Every two or three hours a mustard bath is given, same temperature and time as stated above; should faintness or dizziness occur, the patient is placed at once in the horizontal position, using vigorous friction on the chest.

The bath raises the rectal temperature ½ to 2°. The arterial pressure and increased activity of the circulation produces a lessening or disappearance of the cyanosis, and promotes perspiration and sleep, frequently the urine is voided and the cramp relieved during the bath. (e) Should this fail, transfusion is resorted to several times daily. (f) To encourage excretion of urine, the bladder is filled with a warm solution of boric acid. (g) Adjuvants—Caffein, subcutaneous ether injections, oxygen, leeches, cotton wrappings. (h) As soon as the appetite returns, (third day of treatment) coffee, bouillon, and wheat bread are the first given. Milk had frequently produced symptoms of indigestion.—*Deutsche Med. Zeit.*, Sept., 1892.

Neuman (*Deutsch. Med. Woch.* Sept., 1892) desires to direct the attention of the practicing physician to the efficacy of the subcutaneous saline injections used successfully by Cantoni during the cholera epidemic of Italy in 1884. It is necessary to use large quantities of the solution (children 100 to 300 grms.; adults 1000 to 1,500 grms.). Shortly after the infusion there is a marked improvement in the pulse-rate; in very grave cases there will be a gradual relapse after a few hours, which makes it necessary to repeat the dose, a second, third or fourth time. This treatment can be carried out successfully by the general practitioner minus the complicated hospital appliances in the following manner: Take an ordinary clean cooking vessel (tea-kettle) boil the water 10 to 15 minutes at the end of which time the given amount of table-salt is added, (1 heaping teaspoonful to 1 litre of water) allowing it to cool to the proper temperature the vessel is placed at the required height to act as the reservoir for a syphon, one end of a long piece of tubing is placed into the solution and fastened securely; the other armed with the canula for insertion under the skin.

The injection is given preferably in the soft parts, directing the point of the canula toward the median line of the body and parallel to the integument. During the injection the canula is forced slowly along, in order to permit a greater distribution of the fluid and prevent a reflex. The lump which forms is rubbed vigorously with the one hand, while the other holds the canula. Large quantities should be divided and infused in separate places. The puncture is at once closed with adhesive plaster. Neuman warmly recommends this method based on satisfactory personal experience.

*Translated for MEDICAL AND SURGICAL REPORTER.

A CURIOUS INJURY BY A STROKE OF LIGHTNING.

There is an account in the *Archives of Otology* for January of a case in which a man was struck by lightning on the left side of the head. It passed down the ear and along the neck and breast to the right arm, where it burned through the flesh, leaving the bone exposed, and then passed out into the metal work of the buggy in which he was seated. Some days afterward he applied to Dr. Clark for relief from an otorrhœa which had supervened, when it was found that the external ear and the meatus were burned superficially and the tympanic membrane ruptured, either by the direct stroke of lightning or by the cauterization of the surface of the meatus, followed by suppuration which afterward penetrated the middle car. From the history and the appearances present the former hypothesis was considered the more probable.

AN EXTREME CASE OF SUSPENDED ANIMATION FROM CHLOROFORM RESUSCITATED BY DIRECT-INSUFFLATION IN THE INVERTED POSITION.

By A. E. PRINCE, M. D., Ph. D.,

CONSULTING OCULIST FOR WABASH RAILWAY, ILLINOIS STATE INSTITUTION FOR DEAF AND DUMB, ILLINOIS STATE INSTITUTION FOR THE BLIND, ETC.,

On July 22, 1892, chloroform was administered to Mr. John P—-, aged twenty-eight, for the purpose of opening the mastoid cells for a supposed abscess. The gentleman had a heart murmur, but it was believed that the administration would be unattended by especial danger, particularly as he had, within a few weeks, taken chloroform for another operation. No difficulty was at first experienced. Anæsthesia was rendered complete, and the operation was begun, but in a short time circulation and respiration were suspended, and the patient became livid.

The function of which organ failed first is not known, but, from the fact that there was no pulsation at the moment of the discovery of the arrest of breathing, and that the dark color followed so quickly it is presumed that the case was one of heart failure; which is also rendered probable by the existence of heart lesion, which was recognized.

No time was lost in temporizing, but resort was had at once to the inverted position. The man was suspended by the flexed knees from my shoulders, and subjected to a trotting motion around the operating-room. A description of this procedure will be found in the "Transactions of the Illinois State Medical Society 1890," and in the New York *Medical Journal*, August 22, 1891.

This inverted position, with a jolting motion, was continued while my strength lasted, after which I stood still, and my assistant practiced the Sylvester method, the body being still inverted and suspended from my shoulders. No response followed, and he was placed on the table; to all appearances he was dead. The skin was blue; a hasty ausculation revealed no signs of pulsation. Hæmorrhage had ceased, the last blood being of a very dark color. No time was lost, but the patient was again lifted to the shoulders of my assistant by whom he was trotted around the room for about one minute. At this juncture the account of the infant resuscitation by blowing directly into the mouth, published by Dr. W. E. Forest, in the *Medical Record* of April 9, 1892, entered my mind, and I called a halt, knelt down, took a deep inspiration, joined my mouth with that of the patient, and emptied the contents of my lungs into his.

The chest expanded, and the diaphragm, with the weight of the intestines, was raised, and I doubt not but that the flaccid heart was emptied of its passive blood.

Immediately the weight of the intestines and the elasticity of the chest forced a complete expiration. This was followed by another and another, until I could see that the lividity of the lids was less, though the ashen hue of the countenance persisted. A moment was taken to auscult the heart but no sound was discerned. The artificial expansion of the lungs was resumed, and continued for about three minutes, and we noted with gratification that the color of the lips continued to improve.

An interval was allowed for auscultation, but no effort at natural pulsation or respiration was detected. Again the inflation was resumed, and continued at the rate of about twelve in the minute, for about two minutes, when the gratification was enjoyed of hearing the first natural effort at respiration.

After a little time the patient was placed on a table, and the operation finished under ether anæsthesia.

This is the sixth case of suspended functions which did not respond to either the Marshall-Hall method or the Sylvester method, the first five of which recovered I under suspension treatment. Without this, am convinced all of these would have been lost. The foregoing is the only one that did not respond to the suspension method, and I am under unutterable obligations to Dr. Forest for paving the way to the employment of the direct inflation in the inverted position of the body.—*Med. Record.*

FIRST STAGE OF PNEUMONITIS.

℞

Tr. veratri viridis	M xl.
Tr cinchonæ comp	ʒ j.
Potass. acetatis	ʒ ss.
Morphia acetatis	gr. j.
Aquæ dest., q. s.	ʒ ij.

M. Sig.—ʒ j every two hours.

NOTES ON EPISTAXIS.

By J. K. HAMILTON, M. D. DUB., F. R. C. S. I.

In an elaborate article, in the *Practitioner*, Aug. '92, Dr. Hamilton sets forth the frequency with which physicians meet cases of severe hæmorrhage from the nose. He condemns the routine practice of plugging the nostrils, before a thorough examination is made and other means tried. He states that the source of hæmorrhage is from the septum in a large percentage of cases. The turbinated bones are not so prone to hæmorrhage.

The cause of bleeding in a majority of cases, is either traumatism, an erosion or an ulcerative process. Spurs or ecchondroses, are often found growing from the septum. The apex becoming the seat of dry incrustations, causes a breach of continuity, from which bleeding is apt to occur.

Hæmorrhage, is more frequently arterial, than venous, as it more often occurs, following the removal of ecchondroses, or exostosis. As to the best methods of dealing with hæmorrhage, the doctor, urges first a thorough examination, and unless the bleeding is very profuse or the surface from which it comes is very large, he recommends the *galvano-cautery point*, which application should be thoroughly made. He has found this method most effective.

In the use of cocaine for performing small operations, there is a liability of hæmorrhage following, after the effects of the drug have passed off.

Irrigations with hot water, to which iodine has been added, in the proportion of 1 to 10,000, are very useful. Iodine besides being slightly an antiseptic, is an hæmostatic.

Peroxide of hydrogen, a solution of antipyrin and acito-tartrate of aluminum, are also useful in controlling hæmorrhage.

The use of perchloricle of iron is condemned. If these measures fail he resorts to plugging the nostrils, iodoform gauze being the best material, and a small soft rubber catheter the best instrument for placing it. If one nostril is plugged too tightly bleeding may occur from the other.

THE RELATIONS OF PELVIC DISEASE TO PSYCHICAL DISTURBANCES IN WOMAN.

Dr. George H. Rohè read before the Amer. Ass'n of Obstet. and Gynecol. a paper upon this subject.

The author pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that diseases of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject the following report was submitted:

In a hospital containing 200 insane women, thirty-five were subjected to vaginal examination and twenty-six found with evidences of pelvic diseases. In eighteen of these the uterine appendages were removed with the following results:

Sixteen recovered from the operation and two died. Of the sixteen recovered, three have been discharged from the hospital completely restored, both physically and mentally. In ten, considerable improvement followed the operation in both physical and mental conditions, and in three the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the eighteen cases was melancholia in six cases, simple mania in one, puerperal mania in four, hysterical mania in one, and epilepsy with mania in three.

The author basing his opinion upon his experience, concludes as follows:

"The facts recorded demonstrate first; that there is a fruitful field for gynecological work among insane women; second, that this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere; and third, that the results obtained not only encourage us to continue in the work, but require us, in the name of science and humanity to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

Selected Formulæ.

THE KEELEY CURE.

Dr. Keeley has taken great pains to keep his remedies a secret, but they have been secured and analyzed by competent chemists, and are now well known. The treatment consists in the use hypodermically. four times a day of a solution which shows an analysis of:

℞
Strychnia sulph.....gr. ½.
Atropia.....gr. ¼.
Acid boracic.....gr. xv.
Aq. dest.....oz. iv.

The formula of the tonic taken by the mouth is:

℞
Ammon muriate.....gr. j.
Aloin.....gr. ij.
Tr. cinch. comp.....oz. iij.
Aq. dest.....oz. j.
M. S. Teaspoonful every two hours while awake.

During the initial treatment—for the first one, two or three days—much heavier injections of atropia are given, in combination with morphine. Any physician will know at a glance that the quantity of strychnine used is so minute, considering its relative potency, that it can have little effect in modifying the action of the atropia. The tonics support, to a degree, but they, too, have little influence in controling the symptoms produced by that powerful drug.—*Times and Register.*

THE TREATMENT OF LUPUS OF THE NASAL MUCOUS MEMBRANE.

Cozzilino (*Rivista Italiana di Terapia e Igiene*; *Le Bulletin Médical*, No. 101, 1891) has tried with success the following treatment of lupus of the nasal mucous membrane. After twelve to fifteen applications of the galvano-cautery, which suffice to destroy the exuberant granulations of the ulcerous membrane, he employs the following formulæ to hasten the repair of the tissues:

1. Nasal douche morning and evening of tepid water to which has been added a teaspoonful of the following mixture:

℞
Rectified alcohol.....gms. 200.
Naphthol.....gms. 10.
Menthol.....dgms. 5.
Thymic acid.....gms. 2.

2. After the douche, every three or four days, apply the following solution upon a tampon:

℞
Distilled water.....gms. 50.
Trichloracetic acid.....gms. 6.

3. During the days when this solution is not applied the following is used, night and morning:

℞
Camphorated naphthol.....gms. 20.
Pure carbolic acid.....dgms. 5.
Glycerine.....gms. 25.

4. If there form yellowish, dense crusts, which are characteristic of this affection, then instead of detaching them at once they may be softened by the application of the following salve:

℞
Vaseline.....gms. 40.
Aristol.....gms. 3.
Mercurialized iodol.....dgms. 3.

5. During the day the following powder may be insufflated ten or twelve times through the nose:

℞
Aristol.....gms. 3.
Pulverized naphthol.....dgms. 5.
Boric acid.....gms. 10.
Resorcin.....gms. 2.

LEUCORRHŒA.

℞
Iron oxide, brown ("sub-carb.")
Powdered columbo } of each, 0.10 gm.
Powdered cinnamon
Powdered ergot.....0.25 gram.
One or two such powders daily.

—*Paillard.*

PILLS.

℞
Ergot extract.....1.5 grams.
Iron sulphate } of each, 4 "
Potassium carbon.....
Glycyrrhiza extract } of each, a sufficient
Powdered glycyrrhiza } quantity.
Divide into 50 pills. Two or three every morning, noon, and evening.

—*Braun.*

CACHETS.

℞
Calcium sulphide.....1 gram.
Dispense in 10 cachets. One, mornings and evenings.

For little girls Bouchert recommends frequent lotions of lead-water or decoction of marshmallow leaves, and the injection of a 1:3000 solution of corrosive sublimate.—*Mortimer—Wilson.*

CREOLIN-PEARSON IN DIPHTHERIA.

PAINT.

℞
Creolin-Pearson.....1-2 parts.
Water.....100 "
Externally!

The parts which are the seat of the false membranes, are wiped three times daily with a pledget of cotton saturated with this solution. At the same time, compresses of iced water or ice are constantly applied to the throat externally. Under the influence of this treatment, combined with a stimulant [wine, cognac], the author claims the false membranes and fever disappear in three days.

—Jacob Munk, *La Sem. Méd.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, OCTOBER 8TH, 1892.

INOCULATION AGAINST CHOLERA.

Scientists have succeeded so far in their experiments with animals that they now consider themselves justified in experimenting upon men, to render them immune against Asiatic cholera. About two months or more ago, several persons were inoculated at Paris and the experiment created some considerable interest in scientific circles, while quite recently a *Herald* correspondent, Mr. Stanhope, has brought the matter to more general notice by undergoing the inoculation and then exposing himself to the disease in Hamburg. The papers—especially the *New York Herald*—have considerable to say about the matter just at present, but their communications really have very little scientific value, and although Mr. Stanhope has lived through the cholera epidemic, his case, while of very great interest, must not be looked upon as a demonstration of the efficacy of the preventive treatment.

Mr. Stanhope is certainly not the only person in Hamburg who exposed himself to the dangers of infection, and the only thing which he has proven is that cholera did not make way with him. Although he courted danger in every way possible, *we have no way of knowing that he has actually been infected by cholera and that the infection has been rendered harmless by the preventive treatment.* Mr. Stanhope could have carried out his experiment in Paris just as well as in Hamburg, by simply drinking a few pure cultures of the spirillum which causes the disease. Had he done that, and lived through it, we should know at least that he had infected himself with the parasites! But even this would have been no positive proof of the success of the inoculation, unless the experiment of drinking cholera cultures was repeated several times, for there is at least one case on record where a man swallowed the germs purposely and yet did not take the disease! This method, however, would hardly satisfy the *Herald*, for it would have furnished but one or two pages of material, at the most (with possibly an obituary notice a few days afterwards), while the present mode of experimentation furnishes many pages of printing matter.

We do not wish it understood for an instant, that the MEDICAL AND SURGICAL REPORTER is casting any slurs upon Mr. Stanhope or his enterprise, but we do wish most decidedly to warn our readers not to place too much confidence in this dare-devil (rather than scientific) experiment and not to expect too great results from preventive inoculations against cholera until the experiments are conducted in a

strictly scientific manner. In a word, we have the greatest respect for Mr. Stanhope's bravery, but we have not very much confidence in the value of his experiment, because, as we stated above, although we know that he underwent preventive treatment and exposure, we have no positive proof that the cholera germs have actually gained access to his intestines.

Periscope.

THERAPEUTICS.

THE ACTION OF ANTIPYRIN ON THE BACILLUS OF DIPHTHERIA.

M. Vianna, of Bahia, in Brazil, has been investigating the action of antipyrin upon Loffler's bacillus, and finds that it has marked bactericidal powers upon the pathogenic organism of diphtheria, and also that it destroys the toxic properties possessed by the products of that microbe.

His results are published in *Le Bulletin Médical*, March 30th, 1892. In his first series of experiments, M. Vianna found that in the proportion of 2½ per cent. antipyrin prevents the development of the bacillus of diphtheria in the various culture media in which it will usually grow. More than this, the addition of antipyrin to the tubes containing Löffler's bacilli in full growth killed them in less than forty-eight hours. The same result is attained in twenty-four hours, when the proportion of antipyrin is raised to 5 per cent. If the same proportions of the drug as those given above are added to the bouillon filtered from the bacillus, which will contain the toxic substances (which have been so fully investigated by Dr. Sidney Martin and described by him in the Goulstonian Lectures) elaborated by it, it may be proved that the poisonous products of the micro-organisms lose in part these toxic properties. For instance, guinea-pigs were inoculated with the filtered bouillon from cultures of the bacillus of diphtheria, and all died in less than three days; whilst if from 4 to 8 per cent. of antipyrin were added, the animals lived from five to twenty-four days, thus showing that although the drug did not render the inoculation harmless, yet its toxicity was considerably diminished.—*Lancet.*

SULPHONAL POISONING.

Koeber (*Cetralbl. f.klin. Med.*, March 12th, 1892) relates the following case. A man, aged 52, became very melancholic in consequence of increasing deafness, and more particularly of tinnitus. The sleeplessness was treated by bromide salts, and sulphonal. The latter was given in doses of 0.5 to 1.5 g. (the larger dose rarely) and continued during four to five weeks. After a temporary improvement repeated vomiting or, abdominal pain referred to the navel, and obstinate constipation supervened. A change in the urine was also noted. The daily quantity was under 1 litre. It was Burgundy red to reddish black in color, and contained at first no albumen and never any sugar. It did not give exactly the tests for hæmoglobin. Heller's reaction was absent. The specific gravity was 1021. The coloring matter was partly thrown down by alcohol. The crystals thus obtained were soluble in water, not in ether and chloroform. The chloride salt was taken up by amyl alcohol with coloration. Lead oxide precipitated and took up the coloring matter, when treated with acetic acid and common salt hæmin crystals were obtained. No sulphonal was present. The sulphonal was omitted but the color of the urine deepened, albumen, and formed elements—leucocytes, casts, but no red cells being found. Then retention of urine supervened, and later death. It would appear that the sulphonal was stored away somewhere in the body, possibly in the liver. The absence of albumen at first would apparently prove that the excretion of hæmoglobin could produce a true renal inflammation.—*Brit. Med. Jour.*

COCAINE.

M. Bignon(*Bull. de Thérap.*) formulates the results of his experimental researches as follows: (1) Cocaine parts with its valuable anæsthetic properties in a decidedly acid solution. (2)In such solutions its power as an anæsthetic is not destroyed, but becomes latent. (3) The anæsthetic property is fully restored by simply neutralizing the acid. (4) All the mineral and organic acids used in the experiments operated in the above manner. (5) The anæsthetic energy of cocaine attains its maximum when, all its acid having been neutralized, the alkaloid is held in sus-

pension by a slightly alkaline liquid. This preparation the author calls milk of cocaine. (6) Milk of cocaine is obtained by precipitating the hydrochlorate or other salt of cocaine by a slight excess of carbonate of soda. The bicarbonate does not act so well. (7) Most of the cocaine salts, especially the hydrochlorate, retain an appreciable quantity of acid; hence their solutions do not possess the full anæsthetic potency of the alkaloid; i.e., a portion of the same remains latent. (8) The anæsthetic power of cocaine salts varies greatly in different cases. Some crystallized hydrochlorates, though perfectly pure, are so acid that 10 centigrams, simply dissolved in water, are no more efficacious than half the quantity when neutralized and made into milk of cocaine. (9) The surgeon's first care, therefore, before using a solution of any cocaine salt, should be to assure himself of its neutrality; this can only be obtained at a sacrifice of limpidity; it is accompanied by some degree of opalescence. (10) The difference in the quantities required for production of anæsthesia is in most cases explainable by the difference in the acidity of the solutions employed. (11) The effect of subcutaneous injections of milk of cocaine on the human subject has yet to be ascertained. Experiments on dogs have given encouraging results in this direction, but the author has not succeeded so far in localizing the action. Milk of cocaine should always be prepared extemporaneously; as by keeping, the alkaloid is thrown down from the solutions, and much of their efficacy is lost.

MEDICINE.

DIABETES MELLITUS EXCITED BY FRIGHT.

The onset of acute glycosuria after mental trouble has recently been commented upon, severe emotional disturbances in some cases being looked upon as the cause of sugar excretion. The following case, related by Teschemacher, is an illustration of this point. The patient was a delicate boy, seven years of age, who had gone through an attack of measles some months previously. Convalescence was very slow; and on account of nocturnal incontinence the urine was examined and found to contain 4 per cent. of sugar. The child was hereditarily predisposed to diabetes, an aunt having died in early life of the disease. Some months later the patient was sent to Neuenahr. The quantity of of sugar then present was 1.9 per cent, but after eight days of treatment with restricted diet it fell to .35 per cent. Bread was then allowed, and in a further period of eight days the sugar had entirely disappeared, and it was likewise absent some days later. Milk was then added to the diet. On the following day the mother sent the boy, who hitherto had not been allowed out of sight, to the post with a letter. On the way he was attacked by a dog, which sprang at him, and he fell to the ground, where he lay half unconscious with terror. He was carried home and put to bed. Trembling at first and speechless, he lay in bed for some hours before he partook of food, while he repeatedly asked for drink. Next day he was brought to Teschemacher, who examined the urine and was astonished to find 3.3 per cent. of sugar. According to the mother, the quantity of urine passed was increased. Restricted diet was again ordered. On the following day the sugar stood at 2.4 per cent.; two days later at only .15 per cent.; and at the end of eight days it had completely disappeared. This case furnishes a striking example of the relapse of glycosuria after great mental excitement. Dietetic errors were strongly denied by the mother, and the ingestion of milk once in measured quantity could not have led to it, as the amount of sugar passed was greatly in excess of lactose in the milk. —*Bérlin. Klin Wochenschr.*, No. 2, 1892.

ASSOCIATED SPASM OF THE SUPERIOR RECTI MUSCLES.

Dr. Reich, of Tiflis, records the following case (*Vestnik Ophthalmologii*). On the 8th of March 1890, a man of thirty years presented himself with the complaint that for ten days his eyes closed and turned upward involuntarily about every ten minutes—sometimes even oftener. He was consequently unable to go about without assistance, and could see nothing during the three or four minutes the spasm lasted. He was otherwise healthy, with light eyes, and moderately dilated pupils. Reich had soon an opportunity of seeing the condition described by the patient, and found both eyes so forcibly moved upward that the pupils, notwithstanding a slight simultaneous raising of the lids, were

hidden from view. The eyes did not remain fixed and motionless in that position, but underwent nystagmic movements, the excursion of which, though varying, was never great. During the course of forty minutes three such attacks, each lasting four to five minutes, were observed. In the intervals the position of the eyes was normal. All that could otherwise be made out was pretty marked drowsiness, and a somewhat slow action of the heart. As to the cause, he had had three days' fever just before the attacks began; there was no history of any blow or any headaches. He did not drink to excess. The treatment adopted was rest with thirty grains of iodide, and an equal amount of bromide of potassium in the twenty-four hours. In a few days the attacks after getting gradually less frequent, stopped altogether.—*Amer. Jour. Med. Sci.*

ALEURONAT AS A FOOD IN DIABETES.

Ebstein (*Deut. med. Woch.*, May 12th, 1892) says that an exclusive animal diet of meat and fat is only possible for a short time, and then bread in as small quantity as possible has to be allowed in addition. The bread recommended for diabetics, whether made from animal or vegetable albumen, has hitherto been found an unsatisfactory substitute for ordinary bread. Even gluten bread has gradually come to be less used, especially in Germany, and a small quantity of ordinary bread up to 100 g. is allowed in preference. Hundhausen was the first to introduce the vegetable albumen known as aleuronat, and prepared from wheat. It is a dry powder, yellow in color, and without taste or smell. It never contains less than 80 per cent. of nitrogenous matters, nor more than 7 per cent. of carbo-hydrates. It may be used in the place of flour for making soups, sauces, etc. Bread made with aleuronat has been recommended, but the quantity of aleuronat present was at best but moderate in amount. The author has, however, succeeded in making a very satisfactory bread with it, which contains in the dry substance 66 per cent. of nitrogenous matters. Thus a diabetic, in taking half a pound of aleuronat bread containing in the dry substance even 50 per cent. of nitrogenous matters, gets 80 g. of vegetable albumen and only 72 g. of carbo-hydrates. Thus he can obtain a comparatively large quantity of the needful albumen from vegetable albumen in the same way as individuals in health. The author says that he has found aleuronat very useful in actual practice.—*Brit. Med. Jour.*

EPILEPSIA PROCURSIVA.

John Ferguson, M. D., (*N. Y. Med. Jour.*, Sept. 5, 1891.) regards this form of epilepsy especially interesting from a medico-legal point of view, as many persons who are now genuine epileptics have suffered from irregular symptoms before their disease declared itself, and others have only these premonitory conditions at the time when criminal acts were perpetrated. He divides this variety of epilepsy into three groups: 1. Those cases where the procursion constitutes the entire attack. 2. Cases where the procursion immediately precedes an ordinary attack of epilepsy. 3. Where the procursion follows an epileptic attack. In a case recorded by the author, the patient, a child, fell out of a high chair when two years old, and had immediately after vomiting and vertigo. A month later he would suddenly stare, flush in the face, rush forward, and then stand with a fixed look. When the attack passed by he would move about as usual. These continued for over a year, when the ordinary epileptic seizures developed. A female patient, age twenty-four, only had attacks when at the table. The face would become pale and then flushed, and the eyes staring. She would rush away from the table, stand still, sit down, or quietly return. No cause could be found. She was unconscious of these acts. At no time was she ever known to have a regular epileptic paroxysm. A third case was that of a man age forty-five, who had undergone a great deal of fatigue, exposure, and excitement. The most characteristic feature was the length of individual attacks. He would pass into the status epilepticus, and in this condition run straight ahead, stand still, then rush on again and again stand. He would sometimes do this for two hours, and then go to sleep. Ordinary epilepsy after a time followed. Another patient began to exhibit spells of absent-mindedness at the age of seven years. Three years later he was noticed to make short runs, of which he had no knowledge when questioned, and at the age of fifteen regular epilepsy

came on. At this time he would perform the run after the epileptic attack. Dr. Ferguson belives that to begin early and well is the real key to success in the treatment of epilepsy, and urges that the closest attention be given to all cases of absent-mindedness and momentary loss of consciousness.

MYELIN NERVE FIBERS IN DEMENTIA.

Dr. Targowla concludes (*Jour. de Med. de Paris*, Oct. 25th, 1891) that in all layers of the gray substance, myelin nerve fibers exist in a transverse direction, whose exact topography has not been pointed out. These disappear more or less completely in all dementias, whether paretic or not. The anterior cerebral lobes are most affected. The relations of this lesion to those of the vessels, nerve cells, neuroglia and meninges, has not been determinded.

DISSEMINATED SCLEROSIS DURING CONVALESCENCE FROM VARIOLA.

Sottas (*Gaz. d. Hôp.*, April 12th, 1892) records the case of a youth, aged 18 years, who contracted variola in June of last year. The rash was discrete, but the nervous symptoms were so severe as to lead to the supposition that he was the subject of meningitis. He became semi-comatose and paralyzed generally; his speech was slow and dragging rather than scanning: there was slight nystagmus, without tremor of the head, and atrophy of the muscles of the trunk and limbs, with great diminution of muscular power. In fact, at this time the paralytic symptoms were dominant, but they disappeared little by little, and gave place to contracture. The reflexes became exaggerated, and there was inco-ordination of voluntary movement, with the characteristic tremors. At the end of February, 1892, he presented the typical picture of disseminated sclerosis. The sphincters were normal, and common sensibility, the special senses and muscular sense were preserved. There were no trophic troubles of the skin. Intelligence was diminished ; he was excitable, impatient, and subject to violent fits of rage without much cause. The author looks on the case as a typical example of disseminated sclerosis of infectious origin.—*Brit. Med. Jour.*

HYPERTROPHY AND DILATATION OF THE HEART IN ADOLESCENCE OR CARDIAC ECSTASIS OF GROWTH.

Blache (*Mal. de l' Enf.*, Paris, 1891, 529.) writes that the principal cause of these cardiac dilatations may be considered the early development of the heart opposed to the late or insufficient development of the walls of the thorax. The treatment should respond to these indications and should moderate the over-activity of the cardiac movements and favor the increase of the capacity of the thorax. As special treatment of the heart the use of digitalis, with or without the addition of iron, of caffeine and particularly the tincture of convallaria are recommended. The tincture of convallaria may be used alone or associated with iodide of potash. The diet should be tonic and such as to rebuild the patient. Wise gymnastics, appropriate to the age and the nature of the conditions, aid in the general development of the patient. Frictions of the skin, either dry or with alcohol, by the aid of a woolen glove, have been used with good results, and are to be preferred to hydro-therapy. During the gymnastic lessons massage of the trunk, of the chest and limbs, is to be employed both to exercise the functions of the muscles and te moderate the gymnastic exercises. Specially to be recommended are certain respiratory gymnastic exercises, which give the best results in developing the thorax and enlarging the chest.

ON ASSOCIATED AND SUBSTITUTE MOVEMENTS IN THE PARALYZED.

Prof. Senator considers this subject in connection with a case. He divides them into three groups. Group (1) includes movements in non-paralyzed muscles, with, or instead of, an intended movement. Group (2) includes movements of similar nature in paralyzed muscles. In group (3) the original movement and its substitute or associated movements has been variously explained. Transference of reflexes, overflow of normal impulse, increased excitability, loss of inhibitory power, and an insufficient decussation of the pyramidal tracts, have all been invoked to explain these phenomena. The cause may be situated altogether outside of the central nervous organs, as in S.'s case, which is the first of the kind on record. A. R., now 53 years old, received a compound fracture of the skull twelve years ago. A

year later he became hemiplegic on the right side with aphasia. The hemiplegia and aphasia improved spontaneously to a considerable degree. After the fracture, he claims to have always experienced pain at the angle of the jaw on the right side and upon swallowing. The tongue deviates strongly to the right. In rest, the arm is lightly flexed and held to the side in pronation, the fingers flexed, the index finger over the flexed thumb. Excitement and irritation bring on choreic movements. Otherwise he presented the usual picture of an old hemiplegic. On protruding the tongue, either actively or passively, whether forcibly or gently, the paralyzed arm becomes flexed, the index finger extended, the other clenched, while the hand is raised to a level with the ear as in a military salute. The same movements were produced by pressure along the painful area at the angle of the jaw and along the anterior edge of the upper third of the sterno-mastoid muscle. Senator believes this to be due to an inflammatory infiltration around the nerves of the cervical plexus extending up to the root of the tongue. The spot is too high up to belong to the brachial plexus. He believes that the movement is reflex and not due to direct irritation.—*Berlin, Klin. Wochensch*, No. 132, 1892.

BENIGN ULCERS OF THE PHARYNX.

Dr. T. Heryng, of Warsaw, under the name "angina ulcerosa benigna," understands a hitherto-undescribed disease, which is characterized by the appearance of ulceration, generally simple, on the arcus anterior in the vicinity of the tonsils, with sharp edges and without inflammatory margin with a somewhat excavated base, covered with a grayish-white exudation which cannot be rubbed off. The length of the ulcerations is about 1 centimetre ($\frac{2}{5}$ inch), the breadth 6 to 8 centimetres (2$\frac{1}{2}$ to 3$\frac{1}{2}$ inches). It does not bleed when touched, and is not very painful. After two or three days this ulceration takes on a healthy action, and after ten to twelve days it heals completely without leaving any scar. Slight general reaction of the organism always accompanies this disease, which resembles most the so-called "angina aphtosa" of B. Fraenkel. The bacteriological examination of the exudation of these ulcerations revealed the presence of two varieties of bacteria,—*streptococcus monomorphus* and *variegatus*,—but as further investigation proved, only the first was constant. The author has observed ten cases of this disease, and in two cases bacteriological examinations were made.—*Gazeta Lekarska*, Nos. 7 and 8, 1892.

SURGERY.

CATHETERIZATION OF THE BILIARY DUCTS.

Terrier and Daily (*Rev. de Chir.*, February, 1892) give the following summary of their anatomical and clinical experiences concerning the feasibility of passing a probe from the gall-bladder along the cystic and common bile ducts: (1) As a rule catheterization of the biliary passages seems to be attended with less difficulty in pathological cases particularly when these passages are dilated in consequence of retention of bile in the cystic duct. (2) In many cases, however, as a result either of curvature of the cystic duct, of persistence of its valves, or of the entrance to the duct being seated on the side of the bladder and not at its hepatic extremity, catheterization is attended with much difficulty. (3) In some cases this difficulty is insurmountable, whilst in others exploration with a probe may be practised very readily. (4) It is impossible to lay down any rules for the guidance of the surgeon. All that can be done is to point out the anatomical conditions by which the results of attempts at catheterization are likely to be influenced. (5) Forcible catheterization, even when the instrument is guided by the finger applied to the under surface of the liver, does not seem to be justifiable, and is always likely to be attended with risk. The author hold that in catherization of the biliary passages silver probes should be used, as metallic instruments can be more effectually sterlized than those made of gum or rubber.—*Brit. Med. Jour.*

A NEW TREATMENT OF CONGENITAL DISLOCATION OF THE HIP-JOINT.

That indefatigable worker, Professor Lannelongue, has recently been led to study this disease, and on December 23, 1891, he announced to his colleagues of

the Société de Chirurgie the discovery of what he considers to be a rational remedy for this malady. A dozen pathological specimens in the museum of the Hospital Trosseau show clearly that the displacement is due to the absence or, at best, rudimentary development of a cotyloid cavity, a like absence of a capsule, and a rudimentary femoral head. By resecting the head of the femur the only result obtained is the subsequent shortening of the limb by interfering with the growth of the femur. Nor is the obvious indication to create a new acetabulum fulfilled by detaching a periosteal flap. Mindful of the sclerogenic properties of zinc chloride discovered by him, M. Lannelongue has utilized his method as a means of raising a ridge of new bone round the head of the femur, and so preventing its displacement. On November 17th he performed this operation on a little girl, aged, three, the subject of this disease. The patient being under the influence of chloroform, and the limb being maintained in extension, twenty drops of a 10 per cent. solution of Zn Cl, were deposited by means of a syringe on the surface of the bone at eight different spots just above the femoral head. A week later a hard, osseous ring was clearly perceptible at this situation. A fortnight after the first operation a second injection of the same solution was practised, with the effect of still further accentuating the acetabular ridge. The tiny subject of this interesting experiment was presented at the meeting. The profession will await with curiosity the ultimate result of this novel essay in the field of constructive surgery.—*Lancet.*

INTESTINAL ANASTOMOSIS AND SUTURING.

Abbe, after reporting several cases of lateral intestinal anastomosis (*Medical Record*, N. Y., vol. xli., No. 14), considers the different methods for accomplishing this purpose. He objects to plates of bone, potato, or catgut, for the reason that the foreign bodies may cause obstruction, that leakage may occur, and in the case of Senn's plates, on account of the necessarily limited size, the opening in the bowel becomes, after contraction, inadequate for the performance of its function. The few extra minutes required to do the method of simple suturing does not add any complication to the case while the security against leakage and blocking is of great value.

The author had the opportunity of making an autopsy on three cases in which he had performed lateral anastomosis. In the first case Senn's plate had been used. The patient died six months after operation. The aperture made in the bowel at the time of operation was one and one-half inches in length. It had contracted to three-fourths of an inch, and was inefficient, except when laxatives were employed constantly. In the second case, the patient had died six months after anastomosis with catgut rings. The opening had contracted from one inch and a half to half an inch. In the third case, eight months after lateral anastomosis of the sigmoid by suturing, the aperture had contracted from three inches to one and one-half inches. This was perfectly competent to perform its functional work.

It is believed that the future utility of lateral anastomosis depends upon openings four inches in length in the sides of the adjacent bowel. This is almost impossible with bone plates, and only to be carried out with very long catgut rings or vegetable plates, and with less security and as much consumption of time as by suturing. The contrast is enormous between dropping back into the abdominal cavity an accurately sutured, absolutely tight and flexible, anastomosed intestine to any position in the cavity which its surroundings demand, and the returning of a huge bunch of bowel, inside of which there is a pair of five-inch plates of bone or raw potato, to remain as irritating foreign bodies stimulating peristalis and tugging at the wound until they are sufficiently softened to be carried away.

It is recommended, in cases of great fecal accumulations to first establish an artificial anus and allow some days for recuperation, when the anastomosis may be performed.

The technique of simple suturing is thus described: "Bring the two surfaces that it is proposed to unite well up in the wound and surround them by small compresses of gauze, towels, or flat sponges wrung out of hot water. Have at hand half a dozen cambric needles threaded with the ordinary finest black embroidery silk that has been well boiled and kept in alcohol. Cut in lengths of not more than twenty-four inches and tie with a single knot at

the eye of the needle, with one end cut to within two inches. Apply two parallel rows of continuous Lembert sutures a quarter of an inch apart and an inch longer than the proposed cut. Leave each thread with its needle attached at the end of its row. Now open the bowel by scissors, cutting a quarter of an inch from the sutures, both rows of which are to remain on one side of the cut. Make the bowel opening four inches long. Apply clamps temporarily to several bleeding-points, pinching the entire cut edge without hesitation. Apply no ligatures. Treat the apposing bowel in the same manner. The clamps remaining *in situ*, the parts are quickly rinsed with water. Another silk suture is now started at one corner of the openings and unites by a quick overhand the two cut edges lying next the first rows of sutures. The needle pierces both mucous and serous coats, and thus secures the bleeding vessels, from which the clamps are removed as needles reach them. This suturing is then continued round each free edge in turn, and all bleeding-points thus secured more quickly than by ligature. The serous surfaces around these button-holes are then rapidly secured by a continuation of the sutures first applied, the same threads being used, the one nearest the cut edge first. The united parts are again rinsed with water and dropped into place.

In conclusion, Abbe reiterates his conviction: 1. That the attempt to simplify the technique of lateral anastomosis by bone plates and other devices has not improved it. 2. That lateral anastomosis properly done is eminently the safest and best method of restoring the canal in most cases. 3. That simple and thorough suturing with a fine silk continuous suture, applied after the manner detailed, is most satisfactory. 4. That in order to allow for the inevitable tendency to stenosis, an aperture four inches long should be made. 5. That scarifying apposing surfaces is entirely unnecessary to quick and solid repair.—*Amer. Jour. Med. Sci.*

TREATMENT OF APPENDICITIS.

Dr. Senn arrives at the following conclusions:

1. All cases of catarrhal and ulcerative appendicitis should be treated by laparotomy and excision of the appendix as soon as the lesion can be recognized.

2. Excision of the appendix in cases of simple, uncomplicated appendicitis is one of the easiest and safest of all intra-abdominal operations.

3. Excisions of the appendix in cases of appendicitis before perforation has occurred, is both a curative and prophylactic measure.

4. The most constant and reliable symptoms indicating the existence of appendicitis are recurring pains and circumscribed tenderness in the region of the appendix.

5. All operations should be done through a straight incision; parallel to and directly over the cæcum.

6. The stump after excision of the appendix should be carefully disinfected, iodoformized and covered with peritoneum by suturing the serous surface of the cæcum on each side over it with a number of Lembert stitches.

7. The abdominal incision should be closed by two rows of sutures, the first embracing the peritoneum, and the second the remaining structures of the margins of the wound.

8. Drainage in such cases is unnecessary, and should be dispensed with.—*Medical Progress.*

TREATMENT OF SPRAINS.

Dr. N. W. Cady regards the following as an infallible remedy for sprains: A half hour's douching with water at a temperature of 120 degrees F., and the fixation of the joint by a splint on the flexor side of the joint, or upon the extensor side, if that be more convenient.—*Med. Record.*

OBSTETRICS.

MISSED ABORTION.

Three typical cases of this condition are presented to his reader (*Lancet*,) by Dr. Lewers, Obstetric Physician to the London Hospital. He says:

Cases of missed abortion are by no means uncommon; they are easily recognized if the possibility of the existence of the condition is kept in mind and proficiency has been acquired in the bimanual method of examination especially so far as

concerns the determination of the size of the uterus. Yet comparatively little prominence has been given to the subject by the majority of writers on gynæcology, with the notable exception of Dr Matthews Duncan, whose classical lecture on "Missed Abortion" first led me to recognize cases of the kind. The history is usually of great importance. In most cases the patient, having been previously regular, misses one or more periods and, especially if more than one period has been missed she probably believes herself to be pregnant. If it should happen at this time that the medical attendant is called on to make an examination, the size of the uterus as determined by him may be of much value in making the diagnosis when other symptoms arise later on. We have, then, to begin with, an interval of amenorrhœa accompanied by the other symptoms and signs of early pregnancy. Generally the first indication of there being anything unusual in the case is the occurrence of hæmorrhage, usually at first slight and intermittent, the intervals between the losses being days or weeks; or it may be that there is a constant, blood-stained discharge, the proportions of blood varying from time to time. It is usually on account of this hæmorrhage that the patient seeks advice. It is obvious how valuable a previous examination of the patient may prove, if a month or more has elapsed since the previous examination: for it may be found that the size of the uterus has remained stationary or has even somewhat diminished. It often happens, however, that we have no previous examination to guide us, and then it is best to compare the size of the uterus when the case is first seen with the size it should have been had the pregnancy been a normal one, reckoning from the beginning of the interval of amenorrhœa. The treatment depends on the amount or persistence of the hæmorrhage. In some cases bleeding is inconsiderable till pains come on leading to the spontaneous expulsion of the ovum. In other cases bleeding is often rather free from time to time, and may be continued over a long period without the uterus showing any tendency to discharge its contents. In the second case described, bleeding had lasted three months. In such cases the right treatment is to dilate the cervix and clear out the uterus.—*Md. Med. Jour.*

GYNECOLOGY.

PREGNANCY AND OVARIAN TUMOR.

Dr. Wm. Gardner (*Montreal Medical Journal*) says:

The association of pregnancy and ovarian tumor, if left to nature, is fraught with danger to the woman, whether the termination be premature or at full term. When left to nature, abortion or premature labor may occur, in either case with frequently fatal results to the mother.

When the case proceeds to labor at full term, the result to the mother may be rupture or such other injury to the tumor that fatal peritonitis carries her off.

Tapping of the tumor, while it may temporarily relieve tension, is by no means free from danger by injury to the uterus or otherwise, and it does not cure the patient.

Ovariotomy with modern precautions is nearly as safe as in the non-gravid condition of the uterus, while the woman is at once cured of a disease which must ultimately demand operation.

The second case here related shows that serious complications such as torsion of the pedicle and consequent peritonitis with adhesions, necessitating the use of the drainage tube for so long a period as five days, does not necessarily lead to abortion.

Ovariotomy in the present status of surgery, in the great majority of cases, must be the only proper treatment, and is often urgently demanded to relieve tension.

The indication for the operation in the case of small abdominal tumors is even more urgent, because of their great liability to torsion of the pedicle; and in the case of the pelvic tumors, by reason of the almost certain rupture or necrosis from compression during labor.

CONSERVATIVE TREATMENT OF TUBAL DISEASE.

At the meeting of the Academy of Medicine, says *New York Medical Journal*, Dr. Paul F. Mundé read a notable paper on the conservative treatment of salpingitis. The paper was remarkable for the clearness with which it showed the absence of justification for what the author termed the Birmingham epidemic, meaning the rage for salpingo-oophorectomy. He con-

siders it one of the draw-backs to the Listerian system that it has robbed certain mutilating and unnecessary surgical procedures of their dangers to life and consequently led to their indiscriminate and uncalled for execution.

Dr Mundé used the word conservative in the sense of preservative of the essential organs in women, and it is interesting to note that their preservation is not incompatible with a curative laparotomy, as was strikingly brought out in the discussion by Dr. Polk, who related the history of a case in which he had removed the ovary of one side and about half the ampulla of the oviduct on the other side, and yet the patient conceived.

This case is in striking contrast to the opinions of those who declare that in cases of tubal disease the organs are rendered useless, and that their removal is therefore really of no loss to the patient.—*Méd. Mirror*, Sept, 1892.

AMENORRHŒA OF SCHOOLGIRLS.

Dr. T. A. Reamy in discussing the amenorrhœa of anæmia, common to schoolgirls, says: (1) She must leave school, and not even study at home. (2) She must spend several hours each day in the open air, either walking or riding. In winter she must, of course, be warmly clad; but must wear no sheepskins or other chest-protecting pads. Standing in the open air, she must be induced to breathe deeply with the mouth closed, this should be done for at least fifteen or twenty minutes, and be repeated at least twice a day. Nothing that can be done will more rapidly improve the character of her blood. (3) She must sponge her extremities and body each morning on arising from bed. The water must be of the temperature of the room, and she must practice friction freely with an ordinary towel. (4) She must drink plenty of milk and eat plenty of beefsteak. (5) She must take small doses of iron, combined with some bitter tonic, three times a day. Improvement may be somewhat slow, but if this course is faithfully carried out a perfect cure will result, and her education may then be finished.

If this course or its equivalent be not followed, these cases will go from bad to worse, and finally die of pulmonary tuberculosis.—*Arch. Gyn. Obs. and Ped, Canada Lancet.*

HYGIENE.

IMMUNITY PRODUCED BY MILK.

Brieger and Ehrlich (*Deut. med. Woch.*, May 5th, 1892) rendered a gravid goat immune against tetanus. Up to a certain point ascertained by the authors, immunity could be conferred on mice against inoculation with tetanus bouillon by subcutaneous injections of the milk (0.2 centigramme) from this goat. By feeding the older mice with the goat's milk, no immunity could be brought about, perhaps in part because mice do not thrive on this milk. It is indispensable to isolate these protective substances. After the separation of the casein, the whey still retained the protective powers of the milk. The authors say that they have also obtained positive results by the same method in the case of enteric fever infection.—*Brit. med. Jour.*

CATARRHAL LARYNGITIS OF BICYCLISTS.

Dr. Rayoneau (*Med. Neuigkeiten*, No. 2, 1892) describes it as follows: Acute beginning; sensation of dryness; cough, with a somewhat mucous expectoration, and now and then faint streaks of blood. The voice is changed, the mucous membrane of the throat is reddened. The writer has observed these symptoms in nine young men who rode the bicycle to excess several times a day. The mouth breathing, the rapidity and the pressure with which large quantities of air are forced into the larynx and lungs are the cause. In all cases avoiding of the cause was followed by rapid recovery.

INJURIOUS EFFECT OF THE TELEPHONE UPON HEARING.

Gellé, of Paris, observes that those who frequently use the telephone sometimes present a series of aural disturbances similar to those resulting from the continued action of loud noises. In such cases there may be found inflammation of the membrana tympani and of the tympanic cavity, or there may be irritable conditions of the nervous apparatus of the ear, exercising an influence upon the general nervous system. Hence in the cases observed, there were pains in the ear, diminished hearing, subjective noise, hyperæsthesia

acoustica, and vertigo, all of which were manifested at first during loud auditory impressions, but later became permanent, with general nervous irritability. Probably, for the production of the aforesaid disturbances, there must be a certain predisposition, due either to a greater excitability of the entire nervous system or a previous and still existing disease of the auditory organ.—*Annals des Maladies de l'Oreille*, No. 12.—*Amer. Jour. Med. Sci.*

NEWS AND MISCELLANY.

THE NEW FRENCH MEDICAL LAW.

The progress of the *projet de loi* relative to the practice of medicine in France has been so much interrupted by changes of Ministry and minor political complications that it is hardly surprising if even "official persons" (to use a favorite phrase of Carlyle's) in this country are in some perplexity as to the exact situation of affairs at present. In view of inquiries which have been addressed to us on the subject, we thought it well, in the absence of authentic official information, to apply direct to Professor Cornil, who, as a member of the French Senate and author of the elaborate report on the Bill, a summary of which was recently given in the *British Medical Journal*, is the highest authority on the subject. M. Cornil has favored us with a reply, of which the following is a translation: "The Bill as to the practice of medicine, passed by the Senate, was sent back to the Chamber of Deputies because the Senate had introduced several modifications into the text as passed by the Chamber. I hope it will soon come back to us in the Senate, unless the Chamber allows it to pass just as we sent it to them." It is at least clear from this somewhat Delphic utterance that the *projet* has not yet accomplished its final development into law. We believe, however, that the Chamber has already passed the first clause of the Bill, which is the one which chiefly concerns foreign practitioners. It may be taken for granted, therefore, that the lower grade of *officier de santé* is doomed, and that henceforth all persons wishing to practice medicine in France must possess the diploma of Doctor granted after examination before a French Medical Faculty. Exemptions from certain parts of the earlier examinations may be made in the case of foreign qualified practitioners, but in all cases the three final examinations must be passed in full.—*Brit. Med. Jour.*

HEREDITARY TRANSMISSION OF MUTILATIONS.

Upon the subject of hereditary transmission of mutilations, some interesting observations have recently been recorded by Dr. C. G. Lockwood, of New York. He says: "I selected a pair of white mice on account of their rapid breeding. I bred them in and in for ninety-six generations, as they breed every thirty days, and when they are thirty days old they are able to reproduce themselves. I destroyed all sickly and defective ones by breeding only the fittest. I bred all disease out of them and had a pure-blooded animal, larger and finer in every way than the original pair. In breeding their tails off, I selected a pair and put them in a cage by themselves, and when they had young I took the young and clipped their tails off. When old enough to breed I selected a pair from the young and bred them together; and when they had young I clipped their tails. I continued this breeding in and in clipping each generation and selecting a pair of the last young each time, in seven generations. Some of the young came without tails, until I got a perfect breed of tailless mice. I then took one with a tail and one without a tail, and bred them together, and by changing the sex each time—a male without a tail, a female with a tail, and next a female without a tail and a male with a tail—I was finally rewarded with all-tail mice." So far as they go, these experiments appear to be conclusive of the hereditary transmission of mutilations, but more evidence is greatly needed upon the subject.—*Med. Press.*

PRIZE ESSAYS.—ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Mich., offers the following prizes:

1st. One hundred dollars for the best essay "*On the Physical Action of Alcohol, based on Original Research and Experiment.*"

2d. One hundred dollars for the best essay "*On the Non-Alcoholic Treatment of Disease.*"

These essays must be sent to the Secretary of the Committee, Dr. Crothers, Hartford, Conn., on or before May 1, 1893. They should be in type writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wis., in June, 1893, and the successful essays read.

These essays will be the property of the Association and will be published at the discretion of the committee. All essays are to be scientific, and without restriction as to length, and limited to physicians of this country.

Address all inquiries to

T. D. CROTHERS, M D.,
Secretary of Committee,
Hartford, Conn.

OFFICIAL CHANGES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE FIVE WEEKS ENDED SEPTEMBER 24, 1892.

Hutton, W. H. H., Surgeon. To proceed to Cape Charles Quarantine for special duty, Aug. 27, 1892. To proceed to Sandy Hook, N. J. for special duty, Sept. 10, 1892. Relieved Sept. 16, 1892.

Hamilton, John B., Surgeon. To report in Washington, D. C.. for special temporary duty, Sept. 2, 1892.

Sawtelle, H. W., Surgeon. Detailed for special duty as quarantine inspector Canadian frontier, Sept. 5, 1892. To proceed to Sandy Hook, N. J., for special duty. Sept. 16, 1892.

Stoner, G. W., Surgeon. Detailed for special duty as quarantine inspector Michigan ports, Sept. 3, 1892.

Meade, F. W., Surgeon. To proceed to Baltimore, Md., on special duty, Sept. 24, 1892.

Banks, C. E., Passed Asst. Surgeon. To proceed to Washington, D. C., for special duty, Aug. 26, 1892. To rejoin station Sept. 8, 1892. To proceed to Washington, D. C,, for special duty, Sept. 22, 1892.

Devan, S. C., Passed Asst. Surgeon. To proceed to Delaware Breakwater Quarantine for special duty, Aug. 28, 1892.

Kalloch, P. C., Passed Asst. Surgeon. To proceed to Portland, Me., for temporary duty Aug. 26, 1892. Detailed for special duty as quarantine inspector Maine ports, Sept. 8, 1892. To proceed to Washington, D. C., for special duty, Sept. 15, 1892. To proceed to Portland, Me., for temporary duty, Sept. 22, 1892.

Wasdin, Eugene, Passed Asst. Surgeon. To proceed to Sandy Hook, N. J., for special duty, Sept. 13, 1892.

White, J. H., Passed Asst. Surgeon. To proceed to Way Cross, Ga., for special duty, Sept. 19, 1892.

Kinyoun, J. J., Passed Asst. Surgeon. To proceed to Baltimore, Md., on special duty, Aug. 27, 1892. To proceed to Philadelphia, Pa., on special duty, Sept. 1892. To proceed to New York, N. Y., on special duty, Sept. 21, 1892.

Cobb, J. O., Passed Asst. Surgeon. To proceed to Sandy Hook, N. J., for special duty, Sept. 19, 1892.

Stoner, J. B., Passed Asst. Surgeon. To proceed to Sandy Hook, N. J., for special duty, September 13, 1892.

Wertenbaker, C. P., Passed Asst. Surgeon. To rejoin station (Chicago,) Aug. 28, 1892.

Perry, J. C., Asst. Surgeon. To proceed to Norfolk, Va., for temporary duty, Aug. 27, 1892. To proceed to Cape Charles Quarantine for special duty, Sept. 8, 1892.

Simpson, W. G., Asst. Surgeon. To proceed to Delaware Breakwater Quarantine for special duty, Sept. 2, 1892.

Rosenau, M. J., Asst, Surgeon. To proceed to Cape Charles Quarantine for special duty, Sept. 10, 1892.

Cofer, L. E., Asst. Surgeon. Granted leave of absence for sixty days on account of sickness, Sept. 2, 1892.

Stewart. W. J. S., Asst. Surgeon. To proceed to Charleston, S. C., for temporary duty, Aug. 26, 1892. To rejoin station (New York,) September 2, 1892.

Strayer, Edgar, Asst. Surgeon. Assigned to temporary duty at Boston, Mass., Sept. 6, 1892.

PROMOTION.

Geddings, H. D., Commissioned as Passed Assistant Surgeon, Sept. 2, 1892.

Wertenbaker, C. P., Commissioned as Passed Assistant Surgeon, Sept. 2, 1892.

APPOINTMENT.

Strayer, Edgar, M. D., of Pennsylvania, Commissioned Assistant Surgeon, Sept. 2, 1892.

OFFICIAL CHANGES IN MEDICAL DEPARTMENT U. S. A. FROM SEPT. 25, 1892, TO OCT. 1, 1892.

Captain Edgar A. Means, Assistant Surgeon U. S. Army is relieved from further duty with the Commission appointed for the location and marking of the boundary between Mexico and the United States, and will without delay proceed from El Paso, Texas, to Fort Clark, Texas, and report in person for duty to the commanding officer of that post.

Major Robert H. White, Surgeon U. S. Army, granted leave of absence for two (2) months, to take effect during October 1892.